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# CHAPTER 2

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## SECTORAL TRADE

### INTRODUCTION

This Chapter assesses the effect of NAFTA on sectoral trade. It is divided into two sections. The first section discusses common patterns that emerge across sectors. The second section examines 11 key industrial sectors, as well as the agricultural commodities sector, addressing for each tariff and non-tariff changes effected by NAFTA, trade flows since 1993, and employment, earning, investment and production patterns in U.S. trade with Mexico.<sup>31</sup> The analysis isolates the effects of NAFTA in each sector, to the extent possible.<sup>32</sup>

### COMMON PATTERNS

#### Summary of Findings

- U.S. suppliers hold dominant shares of Mexico's import markets and in many sectors have expanded their shares significantly under NAFTA, at the expense of suppliers from other countries.

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<sup>31</sup> Because NAFTA largely carried forward the provisions of the CFTA for U.S.-Canada trade, including its ten-year tariff phase-out schedule (initiated in 1989), and made relatively few changes in either country's investment practices, this Chapter concentrates on U.S.-Mexico trade and investment effects.

<sup>32</sup> The statistical information relied on in this Chapter is drawn from numerous sources, including the Bureau of Census, the Customs Service, the Bureau of Labor Statistics, the Department of Agriculture, the Mexican Ministry of Finance, and Statistics Canada.

## OPERATION AND EFFECT OF THE NAFTA

- In almost all sectors, Mexico has made large reductions in tariff barriers under NAFTA, compared with only slight U.S. reductions.
- Increases in the U.S. share of Mexico's import market are indicative of NAFTA's effects, since they control for factors that affect all foreign suppliers similarly, such as Mexico's recession.

### Overview

As indicated in Chapter 1, isolating the effects of NAFTA from other factors impacting trade during 1994-96 -- NAFTA's first three years -- is challenging on an aggregate basis. That challenge is greatly increased at the sectoral level because of data inadequacies and sector-specific factors. Nonetheless, the overall effect of NAFTA on aggregate trade flows is apparent across the range of individual sectors. For example, sectoral trade flows were often affected by Mexican tariff reductions during the period, which were typically much larger than the corresponding U.S. tariff reductions, largely because U.S. tariffs were initially so much lower. Moreover, bilateral trade expanded rapidly over the past three years with Mexico increasing its share of U.S. imports and the United States gaining an even greater share of Mexican imports.

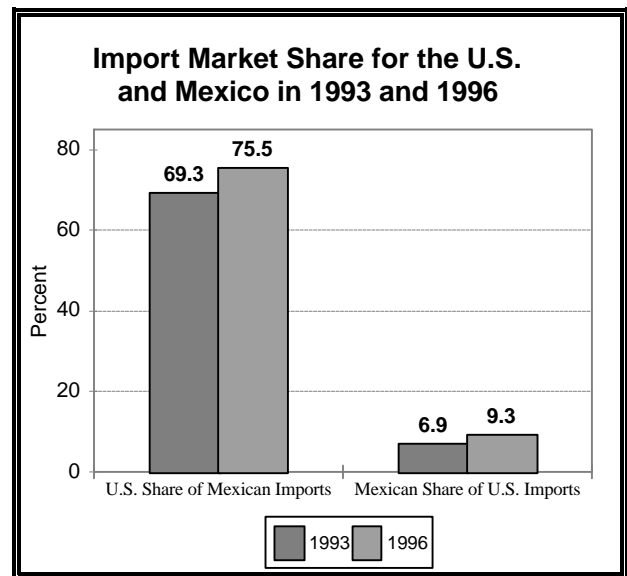


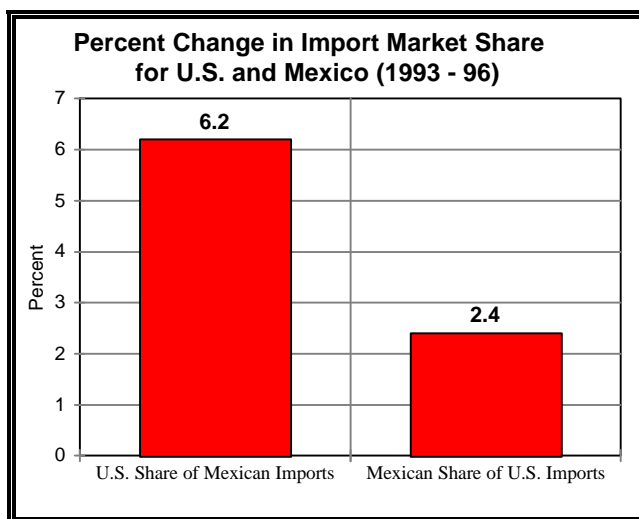
Figure 1

From 1993 to 1996, Mexican imports from the United States rose 48.5 percent (in U.S. dollars), despite the 50 percent depreciation of the peso and Mexican recession, according to official Mexican import statistics. Mexican imports from all other suppliers rose by only 10.1 percent, resulting in a 6.2 percentage point market share gain for U.S. products. By 1996, U.S. exports had captured a nearly 76 percent share of Mexico's total import market. (Figure 1.)

Over this same period, U.S. Government data show that imports from Mexico, accelerated by strong U.S. demand, grew by 86.1 percent. Imports from all other sources grew by 33.3 percent, raising Mexico's share of U.S. imports by 2.4 percentage points to 9.3 percent of the U.S. import market. (Figure 2.)

## SECTORAL TRADE

While absolute changes in exports and imports at the sector level were noteworthy, they often reflected a range of factors other than NAFTA. On the U.S. export side, a more revealing indicator of NAFTA's effect was the change in the share of the Mexican import market commanded by U.S. products in particular sectors. An examination of changes in Mexican import market share can isolate NAFTA from other factors. Unlike other factors -- such as changes in Mexican demand -- that affected all foreign suppliers equally and thus should not have significantly altered import market share, the reduction in Mexico's tariff and non-tariff barriers under NAFTA solely applied to U.S. (and Canadian) products. Those reductions therefore can be expected to have had a differential effect on relative market shares. The greater the reductions in Mexican tariff and non-tariff barriers the greater the impact on relative market share is likely to be.



**Figure 2**

With respect to U.S. imports, however, changes in market share were less indicative of NAFTA's effects in most sectors, because the United States had few significant import barriers prior to NAFTA. The effects of the Mexican peso devaluation overwhelmed the impact of modest U.S. tariff decreases in most sectors by lowering the price of Mexican products in the U.S. market.<sup>33</sup>

The mutual U.S. and Mexican increases in market share also reflect in part cross-border production synergies that were enhanced through NAFTA. By removing trade and investment barriers in North America, NAFTA has begun to make all three countries more competitive relative to third-country suppliers. Evidence from a range of key sectors illustrates this point. Moreover, U.S. imports from Mexico are in many instances displacing imports from Asia and elsewhere.

### **Tariff Reductions**

NAFTA has begun to rectify the tariff disparity between Mexico and the United States that existed prior to 1994. Mexico has made far deeper cuts in its average tariff rates across the range of sectors.

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<sup>33</sup> Mexico was forced to devalue the peso as a result of its balance-of-payments crisis in December 1994. See discussion in Chapter 1.

## OPERATION AND EFFECT OF THE NAFTA

A summary comparison of tariff reductions across 22 broad sectors accounting for all U.S. bilateral goods trade with Mexico is shown in Table 1.<sup>34</sup>

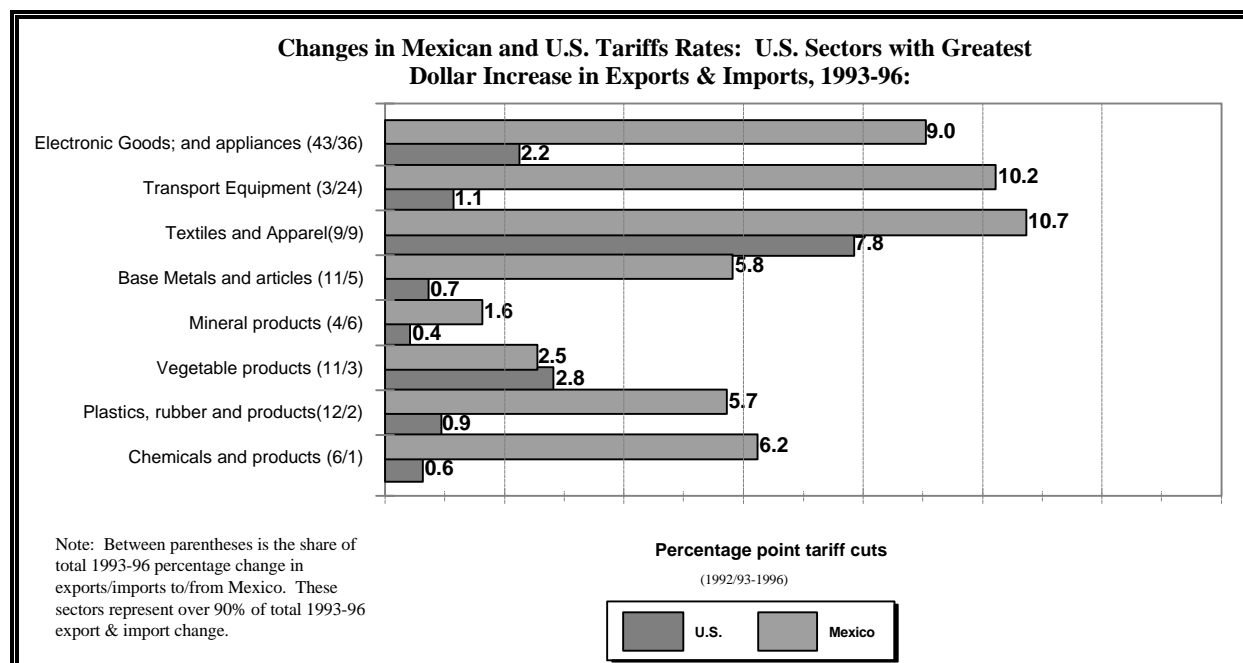
**Table 1**

U.S. Imports from Mexico			Product Groupings	Mexican Imports from the U.S.		
Average Customs Duty (Percent)		Percent Point Reduction		Average Customs Duty (Percent)		Percent Point Reduction
1992	1996			1992	1996	
0.7	0.0	0.7	I - Animals and products	6.5	4.4	2.1
5.6	2.8	2.8	II - Vegetable products	4.1	1.7	2.5
2.5	1.0	1.5	III - Waxes, Fats, and Oil	12.0	8.3	3.7
3.6	2.2	1.4	IV - Food, beverages, spirits and tobacco	15.2	9.6	5.6
0.5	0.0	0.4	V - Mineral products	3.3	1.7	1.6
1.0	0.5	0.6	VI - Chemicals & products	10.2	4.0	6.2
1.1	0.2	0.9	VII - Plastics, rubber and products	13.9	8.2	5.7
5.5	1.7	3.8	VIII - Leather, travel goods, etc.	8.8	5.1	3.7
0.3	0.1	0.3	IX - Wood and related articles	14.4	5.0	9.4
0.6	0.1	0.5	X - Pulp, paper and product	8.4	3.6	4.9
9.1	1.3	7.8	XI - Textiles and apparel	16.0	5.3	10.7
7.8	4.1	3.8	XII - Footwear, headgear and related prod.	18.8	0.6	18.2
4.3	2.6	1.8	XIII - Ceramics, glass and etc.	16.0	6.2	9.7
0.1	0.0	0.1	XIV - Jewelry, precious metals and stones	5.4	1.9	3.6
2.0	1.3	0.7	XV - Base metals and articles	12.4	6.7	5.8
2.6	0.4	2.2	XVI - Electronic goods and appliances	13.4	4.4	9.0
1.6	0.6	1.1	XVII - Transport equipment	15.1	4.9	10.2
2.9	0.4	2.5	XVIII - Scientific and other instruments	12.9	1.5	11.5
0.2	0.0	0.2	XIX - Arms/Ammunition	14.7	0.0	14.7
1.1	0.1	1.0	XX - Misc. manufactured articles	18.3	6.0	12.3
0.0	0.0	0.0	XXI - Art and antiques	14.5	0.0	14.5
0.0	0.0	0.0	Other	9.8	6.9	2.9

<sup>34</sup> These sectors are based on broad trade categories used in the U.S. Harmonized Tariff Schedule. They account for all goods traded with Mexico. A specific sectoral analysis is provided later in this Chapter for 12 sectors. Comparative differences in U.S. and Mexico tariff reductions for the 22 sectors during 1993-96 are based on constructed values using 1992 tariffs, 1993 trade flows, and staged tariff reductions under the NAFTA.

## SECTORAL TRADE

The table illustrates that in each of the 22 sectors, except vegetable products, Mexican import tariff reductions were greater than U.S. import tariff reductions. For example, there was a ten-fold differential in the size of the Mexican and U.S. tariff decreases from 1993 to 1996 for chemicals, a nine-fold differential in tariff decreases for transportation equipment, and a four-fold differential for electronic goods and appliances.



**Figure 3**

For further comparison, the following graph compares Mexican and U.S. tariff reductions for the sectors experiencing the greatest increase in U.S. trade with Mexico for the period 1993-1996.<sup>35</sup> (Figure 3.) The broad sectors included in this graph account for approximately 90 percent of total U.S.-Mexico trade.

<sup>35</sup> These tariff reduction comparisons underestimate the true differential in tariff changes between the United States and Mexico since 1993 because they do not account for the tariff levels that would have prevailed in the United States and Mexico as a result of the Uruguay Round and in the absence of NAFTA. As a result of the Uruguay Round, in 1995 the United States began a phased 35 percent reduction in the tariff rates it applies to imports from most non-NAFTA countries, to be completed by the year 2000. Mexico also will reduce its tariffs during this period, but will do so from much higher average tariff rates than prevailed in 1993.

## **OPERATION AND EFFECT OF THE NAFTA**

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- Of the sectors with the largest U.S. trade growth with Mexico (exports and imports), Mexican tariff reductions exceeded 5.5 percentage points in nearly all of the sectors. The largest percentage point reduction made by Mexico among these sectors was a 10.7 percentage point decrease in tariffs on textiles and apparel. The largest two sectors of U.S. export growth from 1993 to 1996 (electronic goods and appliances and plastics/rubber) benefited from tariff reductions of 9.0 and 5.7 percentage points, respectively. These two sectors accounted for over 50 percent of U.S. export growth to Mexico during the NAFTA's first three years.
- Even in the sectors where Mexican exports to the United States grew rapidly, Mexico made much greater tariff reductions than the United States. In seven of the eight sectors in Figure 3, Mexican tariff reductions exceeded U.S. tariff reductions by a difference of between 1.6 and 10.7 percentage points, and most are over 5.5 percentage points. Aside from the 7.8 percentage point cut in the U.S. textile and apparel sector, the U.S. tariff reductions ranged from 0.4 percentage points for mineral products to 2.8 percentage points for vegetable products. As discussed below, the explanation for the increased Mexican exports to the United States was less these small U.S. tariff reductions than other more important factors such as strong U.S. demand and the devaluation of the peso.

### **U.S. Exports to Mexico**

An analysis of import market shares in the 12 sectors examined later in this Chapter reveals that the United States is by far Mexico's biggest supplier, and has increased its dominance in the Mexican import market in nine of those sectors over the past three years. In absolute terms, U.S. exports to Mexico also increased in nine of the 12 sectors over the three years following NAFTA's inception, in some cases by substantial margins. This growth occurred despite the peso devaluation and Mexico's recession. For example, over the period 1993-1996, U.S. exports of automotive products increased by 11 percent (including a more than five-fold increase in motor vehicle exports), chemicals exports were up by 50 percent, computers by 58 percent, textiles and apparel by 79 percent, and electronic components by 157 percent.

U.S. exports to Mexico in the 12 sectors generally followed common patterns after 1993:

- During 1994, the first year of NAFTA's operation, all but one of the sectors experienced export growth, with many up sharply to record levels.
- In 1995, coincident with Mexico's 50 percent devaluation of the peso and sharp contraction of Mexican demand, U.S. exports for nine of the 12 sectors fell below 1994 levels.<sup>36</sup> Consumer

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<sup>36</sup> By contrast, U.S. exports to Canada grew in all but one of the 11 sectors during 1995.

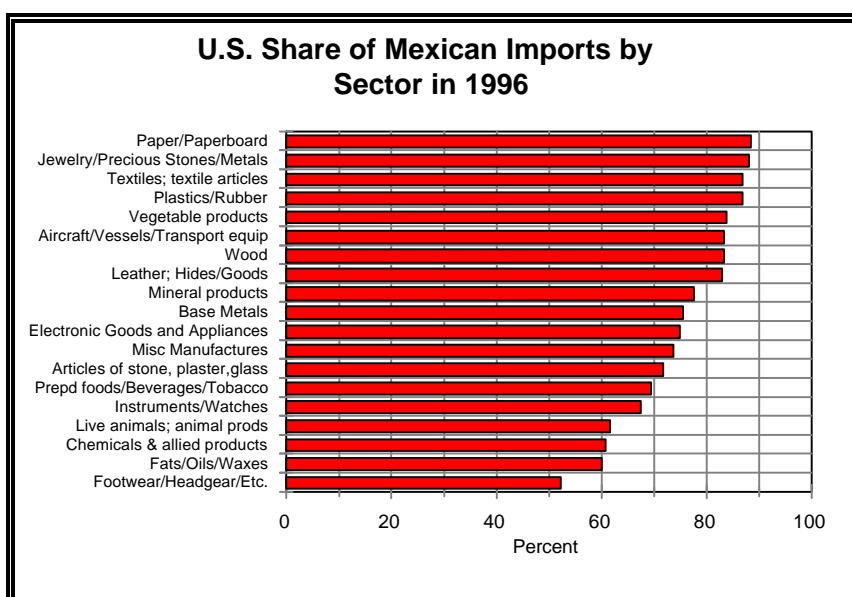
## SECTORAL TRADE

products were particularly hard hit, as Mexican buyers drastically curtailed discretionary purchases.

- Despite their decline in 1995, U.S. exports in 9 of the 12 sectors regained or exceeded their pre-NAFTA export volumes in 1996 as Mexico emerged from recession.
- First quarter 1997 results find U.S. exports in most sectors well beyond where they were in the first quarter 1993, with further increases expected as Mexico's economy recovers to pre-recession levels this year.<sup>37</sup>

### *U.S. Share of Mexico's Import Market*

While these absolute export increases are noteworthy, on a sectoral level, they are not necessarily indicative of a NAFTA effect. A better indicator is the change in the share of Mexico's import market captured by U.S. products from 1993 to 1996. As noted earlier, such changes tend to isolate NAFTA effects, because all exports competing in the Mexican market experience aggregate effects, such as the Mexican recession, equally.<sup>38</sup>



**Figure 4**

Turning again to the 22 sector breakdown of all U.S. exports to Mexico, Figure 4 shows clearly that U.S. exports hold a dominant position in the Mexican import market, and that U.S. exports have maintained or enhanced that dominance since the NAFTA was implemented. In 1996, the U.S. share of Mexican imports exceeded 75 percent in 10 sectors, compared to just three sectors in 1993. The

<sup>37</sup> For example, U.S. exports of automotive products rose by 44 percent over the first quarter of 1997 compared to the first quarter of 1993, exports of recreational equipment rose by 63 percent, chemicals by 71 percent, computers by 96 percent, textile and apparel exports by 107 percent, and exports of electronic components rose by 210 percent.

<sup>38</sup> With the possible exception of strong growth in the U.S. economy. See "Production Synergies in North America" below.

## **OPERATION AND EFFECT OF THE NAFTA**

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four largest U.S. sectoral shares were in paper/paperboard (88.1 percent), jewelry, precious metal stones (87.7 percent), textiles and apparel (86.4 percent) and plastics, rubber and products (86.3 percent). Aside from art and antiques, arms and ammunition, and a residual “other” category, there was no sector of Mexican imports in 1996 in which U.S. exports enjoyed less than a 50 percent market share.

Between 1993 and 1996, the overall U.S. share of Mexico’s import market rose by 6.2 percentage points. Sector-by-sector, the size of these market share gains was positively correlated to the size of the corresponding reductions in Mexican tariffs (excluding arms and ammunition, art and antiques, and the residual “other” category). The largest gains for U.S. exports occurred in jewelry, precious metal stones (import market share up 34.8 percentage points), footwear and headgear (up 21.4 percentage points), transportation equipment (up 19.2 percentage points), and textiles and apparel (up 17.2 percentage points).

Thus, for example, the 17.2 percent point gain in Mexico’s textiles and apparel import market, which brought the U.S. share of that market to 86.4 percent, followed a 10.7 percentage point reduction in Mexico’s average tariff on such items under NAFTA. Similarly, the 19.2 percentage point gain for U.S. exports in Mexico’s transportation equipment market, which brought the U.S. share to 83.1 percent in 1996, followed a 10.2 percentage point drop in Mexican tariffs under NAFTA. In the electronics goods and appliances sector, the U.S. share of Mexico’s import market grew by 5.7 percentage points to 74.3 percent in 1996, as the Mexican average tariff on such imports from the United States fell by 9.0 percentage points under NAFTA. (Table 2.)

## SECTORAL TRADE

**Table 2**

<b>Mexican Imports- U.S. Share of Mexican Imports in 1996, Percentage Point Change</b>			
<b>HS Section</b>	<b>1996 Share (percent)</b>	<b>Change 1993/96 (Perc. point)</b>	<b>Tariff Cut 1993-96 (Perc. point)</b>
I - Animals and products	61.0	0.4	2.1
II - Vegetable products	83.5	6.5	2.5
III - Waxes, Fats, and Oil	59.7	3.5	3.7
IV - Food, beverages, spirits and tobacco	69.0	-1.3	5.6
V - Mineral products	77.3	2.4	1.6
VI - Chemicals & products	60.3	3.2	6.2
VII - Plastics, rubber and products	86.3	0.3	5.7
VIII - Leather, travel goods, etc.	82.5	9.9	3.7
IX - Wood and related articles	82.8	0.1	9.4
X - Pulp, paper and product	88.1	7.4	4.9
XI - Textiles and apparel	86.4	17.2	10.7
XII - Footwear, headgear and related prod.	51.8	21.4	18.2
XIII - Ceramics, glass and stone	71.2	6.5	9.7
XIV - Jewelry, precious metals and stones	87.7	34.8	3.6
XV - Base metals and articles	75.1	4.1	5.8
XVI - Electronic goods and appliances	74.3	5.7	9.0
XVII - Transport equipment	83.1	19.2	10.2
XVIII - Scientific and other instruments	67.1	3.2	11.5
XIX - Arms/Ammunition	28.0	-16.6	14.7
XX - Misc. manufactured articles	73.1	4.8	12.3
XXI - Art and antiques	48.5	-13.8	14.5
Other	46.0	-21.3	3
Total	75.5	6.2	7.2

### **Mexican Exports to the United States**

Mexican exports to the United States increased over the period in all 12 sectors examined later in this Chapter, for the most part continuing trends established prior to the inception of the NAFTA. These increases reflected heightened U.S. demand for goods from all sources, domestic and foreign, stimulated by a strong and growing U.S. economy during the period. As U.S. production levels were at or near full capacity during the period, these imports helped to satisfy increased U.S. demand.

## OPERATION AND EFFECT OF THE NAFTA

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### *Mexico's Share of U.S. Import Market*

Mexico increased its share of the U.S. import market over the period in most of the 22 broad U.S. import sectors, though significantly less than U.S. exports increased their share of Mexico's import market. The largest recorded share increases for Mexico in the U.S. import market between 1993 and 1996 were in transportation equipment (up 5.7 percentage points), textiles and apparel (5.2 percentage points) and miscellaneous manufactured goods (2.2 percentage points). Statistically, increases of Mexican share the U.S. import market showed less correlation with U.S. tariff changes (correlation coefficient of 12.6) than was the case for U.S. shares of the Mexican import market (excluding arms and ammunition, art and antiques and the residual "other" category).

As noted earlier, Mexico's increased share of the U.S. import market is not a reliable indicator of NAFTA's effects because it does not distinguish the effect of Mexico's peso devaluation -- which made Mexican products cheaper by comparison to other imports. Indeed, it is highly likely that the peso devaluation was a more significant reason for Mexico's increased market share than NAFTA because its effect on the price of Mexican imports in the United States was so much larger than that of the average U.S. tariff changes due to NAFTA.

U.S. tariff reductions pursuant to NAFTA also appear to have had relatively little impact on Mexican imports in most sectors, as most reductions were very low.<sup>39</sup> Indeed, in several sectors Mexican exports to the United States enjoyed nearly complete duty-free access to the United States market prior to NAFTA under the GSP that provides duty-free treatment to specific products of selected developing countries. Moreover, special pre-existing U.S. customs provisions also provided for reduced duties on Mexican products incorporating U.S. materials or components. In all, about 50 percent of Mexican imports entered the United States duty free prior to NAFTA.

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<sup>39</sup> An exception was the textiles and apparel sector, for which average U.S. tariff rates for Mexican imports were 7.8 percentage points lower in 1996 than they were in 1993. By contrast, average 1993 tariff levels for chemical imports from Mexico, for example, fell by only 0.6 percentage points over the same period. Moreover, U.S. tariff rates would have fallen from 1993 levels by operation of U.S. commitments under the Uruguay Round Agreements even if the NAFTA had not taken effect.

## SECTORAL TRADE

**Table 3**

<b>U.S. General Imports- Mexican Share of 1996 U.S. Imports and Percentage Point Change</b>			
<b>HS Section</b>	<b>1996 Share (percent)</b>	<b>Change 1993/96 (Perc. point)</b>	<b>Tariff Cut 1993-96 (Perc. point)</b>
I - Animals and products	5.7	-1.8	0.7
II - Vegetable products	22.5	0.4	2.8
III - Waxes, Fats, and Oil	3.5	0.5	1.5
IV - Food, beverages, spirits and tobacco	6.9	1.8	1.4
V - Mineral products	9.3	0.6	0.4
VI - Chemicals & products	2.7	0.3	0.6
VII - Plastics, rubber and products	4.7	1.3	0.9
VIII - Leather, travel goods, etc.	3.7	0.9	3.8
IX - Wood and related articles	3.3	-0.3	0.3
X - Pulp, paper and product	2.5	1.1	0.5
XI - Textiles and apparel	9.6	5.2	7.8
XII - Footwear, headgear and related prod.	2.5	0.4	3.8
XIII - Ceramics, glass and stone	11.3	2.1	1.8
XIV - Jewelry, precious metals and stones	2.9	1.0	0.1
XV - Base metals and articles	7.6	2.1	0.7
XVI - Electronic goods and appliances	10.9	2.0	2.2
XVII - Transport equipment	12.3	5.7	1.1
XVIII - Scientific and other instruments	8.8	2.0	2.5
XIX - Arms/Ammunition	1.4	-1.0	0.2
XX - Misc. manufactured articles	9.4	2.2	1.0
XXI - Art and antiques	0.6	-0.2	0.0
Other	10.5	1.1	0.0
Total	9.2	2.3	1.7

While Mexico's share of U.S. imports across many sectors increased, those increases did not typically displace U.S. production, which was robust across sectors. For example, in two sectors in which Mexico's market share expanded most significantly, auto parts and textiles and apparel, the gains were a reflection of competitive advantages accruing to U.S. and Mexican producers as a result of co-production arrangements. Those arrangements were enhanced by NAFTA and resulted in Mexican imports with relatively high U.S. content displacing imports from third countries, particularly in Asia. In the textile and apparel sector, Mexican imports increased their share of the U.S. import market from 4.4 percent in 1993 to 9.6 percent in 1996. By contrast, the top four suppliers to the United States in 1993 -- China, Hong Kong, Taiwan, and Korea -- lost a combined 9 percentage points of the U.S. import market.

A further indication that Mexican imports did not displace U.S. production is that U.S. production during the period was quite strong and growing. U.S. real industrial production from 1993 to 1996

## **OPERATION AND EFFECT OF THE NAFTA**

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increased by 11.4 percent. The pattern of strong growth in real U.S. output was visible, for example, across the sectors discussed in more detail later in this Chapter. From 1993 to 1995 (latest data available), U.S. output in constant 1992 dollars was up: 2.4 percent for apparel; 3.6 percent for textiles; 4.1 percent for processed foods; 4.9 percent for printed matter; 6.7 percent for chemicals; 7.1 percent for recreational equipment; 7.8 percent for household appliances; 17.1 percent for automotive products; 35.5 percent for telecommunications equipment; 53.6 percent for electrical components; and 80.5 percent for computers.

### **Production Synergies in North America**

The removal of trade barriers and expansion of trade in North America is particularly significant in light of the geographic proximity of the three countries. The long history of low barriers to U.S.-Canadian trade has contributed importantly to coordinated production on both sides of the border, which has created job and economic opportunities, raised living standards in both Canada and the United States, and helped strengthen the competitiveness of producers in both countries. For instance, open borders have long sustained joint automotive production, which has benefitted workers, companies, and consumers on both sides of the U.S.-Canadian border. In part, because of this market-driven coordination of production across the U.S.-Canadian border, U.S. imports from Canada tend to have a relatively high degree of U.S. content.

The reduction of Mexico's tariff and other barriers to U.S. exports under NAFTA has already shown signs of encouraging market-driven coordination of production across the U.S.-Mexican border. This is true in the auto sector, in the telecommunications equipment sector, in computers, in electronic products, and in textiles and apparel, for example. Mexico tends to compete with other low and middle-income countries for labor-intensive, basic production which is complementary with the capital-intensive, highly-skilled production in the United States. For example, in the textiles and apparel sector, the NAFTA appears to be contributing to strong growth in two-way textiles and apparel trade with Mexico. In apparel assembly, Mexico is displacing other leading producers, including China. Mexican assemblers use a much higher percentage of U.S. fabric and components, than other assemblers thereby increasing U.S. exports and increasing the overall level of U.S.-produced content in U.S. apparel imports.

This type of market synergy increases the amount of U.S. content in the final goods sold in the U.S. market, as high value-added U.S. components and U.S. engineering, marketing, and financial services are incorporated. Again, this is apparent in the textile and apparel sector, in which the percentage of Mexican exports by value to the United States incorporating U.S. components rose from 52 to 64 between 1993 and 1996. In many cases, the flexibility permitted by two-country manufacturing operations has made North America the lowest-cost producer of parts or final goods.

## SECTORAL TRADE

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### U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

U.S. employment rose by nearly 8.6 million jobs between December 1993 and December 1996. Manufacturing employment in the United States also rose by 156,000.<sup>40</sup> The U.S. civilian unemployment rate dropped from 6.9 percent in 1993 to 5.4 percent for 1996 (and dropped further to 5.0 percent early in 1997). U.S. employment levels in eleven of the twelve sectors examined later in this Chapter either rose or remained steady over the period.<sup>41</sup>

There was no discernable relationship between U.S. employment levels and U.S.-Mexican trade balances at the sectoral level over the period. For example, in some sectors experiencing large net import flows, such as the automotive sector, U.S. employment levels grew significantly.<sup>42</sup>

In its recent study, the ITC found that the NAFTA had no discernible effects on aggregate employment. Using a qualitative sectoral analysis, the ITC found that U.S. imports and exports attributable to the NAFTA had a negligible impact on U.S. employment in 66 of the 68 sectors that it examined. The ITC found that imports generated by the NAFTA were partly responsible, in combination with other factors, for declines in employment in the apparel and women's non-athletic footwear sectors.<sup>43</sup> It is worth observing that imports from Mexico in these two sectors appear to

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<sup>40</sup> Because of greater productivity growth in the U.S. manufacturing sector relative to the rest of the U.S. economy, strong growth in manufacturing output did not translate into large increases in manufacturing jobs, although manufacturing jobs increased slightly during the NAFTA period. Manufacturing output growth, however, contributed to strong U.S. job growth in non-manufacturing sectors, due to demand generated by the manufacturing sector for inputs from other sectors of the U.S. economy, such as business services.

<sup>41</sup> Employment levels fell in the U.S. textiles and apparel industry, consistent with a three-decade trend.

<sup>42</sup> U.S. employment in the automotive industry grew by 14 percent from 1993 to 1996, including a 10.6 percent increase in employment in the automobile assembly sector. By contrast, Mexican employment in the automotive sector dropped steadily. During the period, U.S. imports of Mexican automotive vehicles and parts rose by \$11.75 billion to a total of \$22.9 billion. U.S. exports to Mexico of automotive vehicles and parts were \$8.4 billion in 1996, up from \$7.5 billion in 1993. In the computer equipment sector, where Mexican imports rose by \$2 billion to a total of \$2.9 billion to 1996, U.S. employment rose 9 percent. U.S. computer exports to Mexico in 1996 were \$1.9 billion, up by \$0.7 billion from 1993.

<sup>43</sup> The ITC reached this conclusion for women's non-athletic footwear despite the fact that it found it difficult to measure the impact of the NAFTA on employment in the sector because Mexico accounts for a small share of U.S. imports (2 percent in 1996) and because a major portion of the increased imports from Mexico from 1993 to 1996 in this sector had occurred in cross-border production operations. The ITC also found that the decline in employment in this sector was attributable in part to higher productivity (up 10 percent from 1993 to 1995) as a result of extensive U.S.-industry restructuring. Imports dominate this sector with 86 percent of the total U.S. market in 1996, up from 79 percent in 1993. Mexico's share of the total U.S. market increased by 1 percentage point during this time period, from 0.9 percent to 1.9 percent.

## **OPERATION AND EFFECT OF THE NAFTA**

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have largely displaced imports from other countries.<sup>44</sup> Moreover, Mexican-made apparel and footwear exported to the United States have higher U.S. content, on average, than imports of these products from Asian and other countries.

In its qualitative analysis, the ITC also found that in 67 of 68 sectors, the NAFTA had a negligible effect on U.S. wage levels. In one sector -- apparel -- the ITC concluded that imports attributable to the NAFTA shifted the composition of employment to higher-wage fabric cutting jobs. Overall, wages increased by 12 percent in the U.S. apparel sector from 1993 to 1996.

In its quantitative analysis, the ITC examined 120 sectors, and considered if changes in the price of Mexican imports -- whether attributable to the NAFTA or not -- had affected U.S. employment or hourly earnings. (The ITC did not analyze whether exports generated by the NAFTA may have raised U.S. earnings or employment levels.) In 20 of these industries, the ITC reported some change in earnings and employment levels. The ITC was unable to say whether any of these changes were attributable to NAFTA.

Because of a lack of data, the ITC was not able to conduct a quantitative assessment of productivity changes, if any, attributable to the NAFTA. Nevertheless, in its qualitative analysis, the ITC reported productivity had increased in all sectors (between 3 percent and 10 percent from 1993 to 1995) where it found the NAFTA to have generated significant changes in exports or imports.

### **EXAMINATION OF SELECTED SECTORS**

Set out below is a detailed discussion of U.S.-Mexico trade and investment in 11 industrial sectors, and the agricultural commodities sector. The industrial sectors are: automotive vehicles and parts; chemicals and allied products; computer equipment and software; four consumer products sectors, namely, household appliances, household and office furniture, printed products, and recreational equipment; electronic components; processed foods and beverages; telecommunications equipment; and textiles and apparel.

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<sup>44</sup> For apparel, the ITC reported that the growth in U.S. imports from Mexico was largely at the expense of traditional Asian suppliers. The ITC also noted that the combined share of the U.S. apparel import market for Hong Kong, Korea, Taiwan, and China declined from 44 percent in 1993 to 34 percent in 1996, while Mexico's share rose from 7 percent to 11 percent. Between 85 to 90 percent of the total value of U.S. imports from Mexico in this sector was generated by imports produced through cross-border production operations (*i.e.*, U.S.-made formed and cut fabric assembled into apparel in Mexico). Over 70 percent of these imports incorporated U.S. content, a far larger percentage than from most producers outside North America.

## SECTORAL TRADE

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The sectors:

- collectively represent about half of two-way merchandise trade between the United States and Mexico and almost two-thirds of manufactured goods trade, encompassing a range of high technology, industrial, and consumer products;
- individually account for a significant volume of U.S.-Mexico trade;
- witnessed major increases in one-way or two-way trade during the period; and
- encompass products that, on average, were subject to significant Mexican or U.S. tariff reductions during the period.<sup>45</sup>

### Summary of Findings

U.S.-Mexico trade and investment patterns in the 12 product sectors reveal that:

- Two-way NAFTA trade has increased significantly in virtually all sectors.
- NAFTA's reduction in tariff and non-tariff barriers contributed to increased U.S. exports of motor vehicles, electronic components, textiles and apparel, computers, chemicals, and a range of agricultural products, and were a factor in increased U.S. imports of Mexican textiles and apparel and light trucks.
- U.S. exports grew in nine of 12 sectors, in some cases by substantial margins, despite Mexico's peso devaluation in late 1994 and subsequent deep recession.
- More importantly, U.S. exports in eight sectors enhanced their share of Mexico's import market since 1993. Market share was flat in three other sectors.
  - Market share analysis suggests that the Mexican tariff reductions under the NAFTA provided U.S. exports an advantage compared to exports from outside North America.
- Mexican exports to the United States also increased in volume and in share of the U.S. import market across a range of sectors. These increases were attributable to factors other than the

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<sup>45</sup> Some sectors accounting for relatively significant one-way or two-way U.S.-Mexico trade, such as the mineral products sector, accounting for 6.7 percent of U.S.-Mexico trade in 1996, were not included in this section of the study because average tariff cuts by both countries during the period for the products covered by the sector were very small. For example, Mexico and the United States cut their average tariffs on mineral product imports by approximately 1.6 and 0.5 percentage points from 1993 to 1996. The trade effects of tariff reductions such as these were undoubtedly minimal.

## **OPERATION AND EFFECT OF THE NAFTA**

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NAFTA in most cases.

- Major influences on imports from Mexico were lower prices due to Mexico's peso devaluation and efficient joint U.S. and Mexican manufacturing operations that further cut the cost of Mexican products.
- In key sectors, like auto parts and textiles and apparel, Mexican market share increases reflected competitive advantages accruing to U.S. and Mexican producers as a result of co-production arrangements, which were enhanced by the NAFTA.
- With very few exceptions, such as textiles and apparel and light trucks, average U.S. tariffs applied to Mexican imports were already at low levels, or at zero. In fact, 50 percent of imports from Mexico prior to the NAFTA entered the United States duty free. Thus, NAFTA tariff reductions cannot account for increased imports from Mexico in most sectors.
- A further indication that Mexican imports did not displace U.S. production is that U.S. production during the period was strong and growing in all 12 sectors.
- Lowered Mexican tariffs and other barriers through the NAFTA encouraged market-driven coordination of production across the U.S.-Mexican border.
  - In major sectors such as auto parts, computers, telecommunications equipment, and textiles and apparel, products made in efficient joint manufacturing operations on both sides of the border are displacing imports from other countries in the U.S. market.
  - Moreover, many imports from Mexico -- such as apparel, motor vehicles, computers, and telecommunications equipment -- contain substantial levels of U.S. content.
- Capital expenditures in the United States exceeded U.S. direct investment in Mexico by large margins across the range of sectors.

## SECTORAL TRADE

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### THE AUTOMOTIVE INDUSTRY

#### Sectoral Findings

- U.S. automotive products industry (motor vehicles and automotive parts)<sup>46</sup> exports to Mexico grew from \$7.5 billion in 1993 to \$8.3 billion in 1996, an increase of 11 percent.
  - Total exports during the period would have been considerably higher but for a major drop-off in consumer demand in Mexico during 1995 and 1996 as a result of Mexico's deep recession.
- U.S. exports of motor vehicles to Mexico rose by more than five-fold.
  - Increased U.S. exports of cars and light trucks to Mexico were directly attributable to reductions in Mexican trade balancing requirements and lower Mexican tariffs brought about by NAFTA.
- Imports of automotive products from Mexico grew from \$11.1 billion in 1993 to \$22.9 billion in 1996. Among the factors responsible for this import growth are:
  - heightened U.S. demand for sport utility and light truck models, which were already under production in Mexico when NAFTA took effect;
  - full utilization of existing U.S. manufacturing capacity for these types of vehicles;
  - strong overall U.S. sales;
  - U.S. tariff reductions on light truck imports from Mexico; and
  - growing demand for parts imports for use in U.S. domestic assembly operations.
- Imports of vehicles assembled in Mexico include a high percentage of automotive parts made in the United States.
  - The NAFTA gradually eliminates Mexican requirements for auto assemblers to build vehicles in Mexico from Mexican-made parts. Therefore, more U.S.-made parts are being used by Mexican auto assemblers than before NAFTA.

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<sup>46</sup> The SIC categories included in this section are: motor vehicles (SIC 3711), trucks and bus bodies (SIC 3713), motor vehicle parts and accessories (SIC 3714), automotive stamping (SIC 3465), carburetors, pistons, piston rings, and valves (SIC 3592), vehicular lighting equipment (SIC 3647), storage batteries (SIC 3691), and electrical equipment for internal combustion engines (SIC 3694).

## **OPERATION AND EFFECT OF THE NAFTA**

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- The NAFTA has increased integration in the North American automotive industry, making U.S. parts and vehicle manufacturers more efficient and competitive in North America and worldwide. For example, NAFTA has enabled Ford to make its established plants in Mexico more efficient. Ford decided to consolidate all production of Ford Thunderbirds and Mercury Cougars at its Lorain, Ohio assembly plant, discontinuing low volume production of these two models at its Cuautitlan plant in Mexico. Similarly, between 1993 and 1995, Chrysler produced its Ram pick-up at one U.S. plant and two Mexican plants. Demand for these vehicles exceeded capacity. As a result, Chrysler started assembling Rams at a St. Louis, Missouri plant in 1995.
- This strong growth in two-way trade between 1993 and 1996 took place against the backdrop of record profits and production levels by U.S. manufacturers, strong sales in the U.S., and rapidly expanding exports of U.S.-made automotive products. The increase in U.S. auto exports to Mexico coincides with the resurgence of the U.S. automotive industry. In 1994, for the first time in fifteen years, the United States produced more motor vehicles than any other country in the world, a feat repeated in 1995 and 1996.
  - U.S. employment in the automotive industry grew by 14.1 percent overall, with an increase of 16.1 percent in the auto parts sector and of 10.1 percent in the motor vehicle assembly sector.
  - U.S. productivity in the automotive industry grew by 7 percent between 1993 and 1995 (latest figure available).
  - Hourly earnings for production workers grew by 5.6 percent between 1993 and 1996 (latest figure available).
- The Big Three U.S. automobile manufacturers invested \$39.1 billion from 1993 to 1996 in new manufacturing plants and equipment in the United States, while investing only \$3 billion in Mexico over the same period.

### **Background**

While U.S.-Canada trade in automotive products has long been virtually barrier-free, the majority of U.S. motor vehicle exports to Mexico faced restrictive trade balancing and local content requirements, as well as tariffs of 20 percent prior to NAFTA. By contrast, Mexico's exports enjoyed largely open access to the United States market. The NAFTA redresses that imbalance and provides an opportunity to create an even more robust U.S. industry within the context of a globally competitive North American automotive industry.

General Motors, Ford and Chrysler (the Big Three) began investing in Mexican production facilities in the 1930s and were followed by Nissan and Volkswagen in the 1960s. In 1965, Mexico began

## SECTORAL TRADE

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implementing a series of automotive decrees intended to increase Mexican employment, encourage investment in Mexico, and control foreign debt.

In the early 1980s, U.S. motor vehicle and auto parts producers established maquiladora parts operations in Mexico to reduce U.S. manufacturing costs in the face of stiff competition from Japan. U.S. auto parts were shipped to Mexico duty free and assembled into components that then reentered the United States for use in the final assembly of motor vehicles. Duties were assessed only on the Mexican value added.

Prior to NAFTA, a majority of Mexican-made automotive parts entered the United States duty-free under the Generalized System of Preferences program (GSP). In addition, a majority of Mexican-made vehicles entered the United States with duties applied on only a portion of the total value of the vehicle. This was possible because of U.S. customs rules that allowed duties to be collected only on the value of non-U.S. materials and labor. It is estimated that more than 50 percent of the value of parts in these vehicles came from the United States. Moreover, with the exception of duties on light trucks, applied U.S. tariffs on most Mexican-built vehicles and automotive parts were very low or non-existent prior to NAFTA.

The last pre-NAFTA Mexican automotive decrees, implemented in 1990, were designed to increase investment in and purchases from independent parts suppliers (*i.e.*, those not owned by the Big Three, Nissan, or VW) in Mexico. The decrees also provided a limited opening for vehicle imports through complicated trade balancing formulas, which sought to ensure that U.S.- and other foreign-owned vehicle assemblers would export more vehicles or parts than they imported. Elimination of the Mexican automotive decrees, with their trade- and investment-distorting effects, was a key goal for U.S. NAFTA negotiators.

### **Developments since NAFTA**

#### ***Highlights of NAFTA Implementation***

##### Tariff Cuts

As required by NAFTA, Mexico reduced its car and light truck tariffs from 20 percent to 10 percent at the beginning of 1994. The remaining duties on light trucks will be phased out by January 1, 1998; duties on cars will be eliminated by January 1, 2003. By January 1, 1998, 75 percent of U.S. automotive parts exports will enter Mexico duty free, with the remaining duties eliminated by January 1, 2003.

The United States eliminated its 2.5 percent tariff on Mexican-built passenger vehicles in 1994. At the same time, the United States cut its 25 percent tariff on Mexican light (pick-up) trucks to 10 percent. The remaining tariff will be eliminated by January 1, 1998. The U.S. 4 percent tariff on cab chasses and the 25 percent tariff on other completed trucks are being phased out over ten years. The

## **OPERATION AND EFFECT OF THE NAFTA**

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majority of Mexican automotive parts entered the United States duty free before NAFTA and remained duty free; remaining duties were either eliminated immediately or will be phased out over five or ten years.

The NAFTA also established stronger North American rules of origin to ensure that automotive products benefitting from tariff reductions are substantially manufactured within the region.

### Elimination of Non-Tariff Barriers

On implementation of NAFTA, Mexico immediately eliminated or reduced significant trade restrictions which had previously served as incentives to investment in Mexico. For example, Mexico eliminated its trade balancing requirement (from \$1.75 of exports for every \$1.00 of imports to \$0.80 of exports for every \$1.00 imported), lowered its local content requirement, and eliminated import quotas on new cars and light trucks. The NAFTA established two transitional import quotas for heavy trucks and buses, one for manufacturers in Mexico and one for companies not manufacturing in Mexico; this sector of the vehicle market will be totally open by January 1, 1998.

### ***Trade Flows***

#### U.S. Exports to Mexico

Intra-company shipments by the Big Three and U.S. parts suppliers account for most of U.S.-Mexican trade. Between 1993 and 1996, the dollar value of U.S. exports of motor vehicles to Mexico increased by 548.7 percent, to \$1.3 billion. Exports grew from roughly 17,000 units in 1993 to about 91,000 units in 1996. Had the peso devaluation and resulting dramatic drop in Mexican economic output and domestic consumption not caused the Mexican automotive market to collapse in 1995, it is likely that U.S. exports to Mexico in that year alone would have reached 87,000 units and might have reached well over 100,000 units, with even greater volumes in 1996. Export volume is up 40 percent to a total of 28,721 units for the first quarter of 1997 compared to the first quarter of 1996. The increase in U.S. motor vehicle exports to Mexico reflected the gradual elimination of Mexican tariff and non-tariff trade restrictions, as required by NAFTA, that had previously limited vehicle imports.

U.S. exports of automotive parts to Mexico fell by 3.5 percent from 1993 to 1996. The decline was directly attributable to the sharp retraction of the Mexican economy in 1995. As the Mexican market improves, U.S. parts exports should continue the recovery that began in 1996. Indeed, first quarter 1997 exports of U.S. auto parts grew to \$2.2 billion, a 25 percent increase over first quarter 1993. Moreover, with the growth in U.S.-made vehicle sales to Mexico, the opportunities for sales of U.S. aftermarket parts in Mexico should rise.

## SECTORAL TRADE

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The U.S. share of the Mexican imported parts market rose 2.4 percentage points<sup>47</sup> in 1994 to 68.7 percent, and rose again in 1995 to 71.2 percent, and increased slightly in 1996 to 71.7 percent. The increases over the first two years were largely due to NAFTA provisions permitting U.S.-assemblers to source a greater percentage of automotive parts from outside Mexico.

### U.S. Imports from Mexico

U.S. imports of motor vehicles from Mexico increased from \$3.7 billion in 1993 to \$11.3 billion in 1996. On average over 50 percent of the content of vehicles exported to the United States from Mexico is U.S.-made, according to industry analysts. Increased U.S. demand for popular sport utility vehicles and pick-up truck models (made in both Mexico and the United States) contributed to the surge in imports during the period. Increased demand for these products generated capacity constraints in the United States that were relieved through increased imports.

U.S. automotive parts imports from Mexico increased from \$7.4 billion in 1993 to \$11.6 billion in 1996, an increase of 58.4 percent. The growth in imports was largely due to a 6.8 percent increase in U.S. motor vehicle production between 1993 and 1996 reflecting strong U.S. domestic demand for automobiles.

### U.S. Trade with Canada

Trade patterns between the United States and Canada have not changed discernibly over the last three years. Remaining duties between the United States and Canada will be eliminated on January 1, 1998 under the pre-existing CFTA schedule. Canada accounts for the lion's share of total U.S. automotive exports and imports.

Total U.S. automotive exports to Canada were \$27.5 billion in 1993, rising to \$34.4 billion in 1996, an increase of 24.9 percent. Total U.S. automotive imports from Canada were \$37.1 billion in 1993 and \$46.3 billion in 1996, an increase of 25 percent. The U.S. dollar value of parts exports to Canada grew 20.7 percent from 1993 to 1996. Parts imports from Canada grew 22.4 percent during the period. The value of U.S. motor vehicle exports to Canada grew 33.1 percent from 1993 to 1996, while the value of motor vehicle imports grew 25.9 percent.

### ***Investment***

Big Three major manufacturing plant investments in the United States from 1993 to 1996 totaled \$39.1 billion. During the same time, the Big Three invested \$3 billion in Mexican facilities.

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<sup>47</sup> Import shares are based on Mexican import data. U.S. and Mexican definitions of what comprises the automotive parts industry are not harmonized.

## OPERATION AND EFFECT OF THE NAFTA

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Big Three passenger vehicle and light truck operating capacity grew by 490,000 units between 1993 and 1996 to a total of 11,037,000 units.<sup>48</sup> In the same period, their capacity in Mexico grew by 241,000 units, reaching a total of 838,000 units. (Operating capacity is a factor of both plant investment and employment levels.) The three companies added 394,000 units to their combined U.S. pick-up truck capacity during the period, compared with 144,000 units in Mexico -- even though NAFTA reduces and then eliminates the U.S. 25 percent duty rate on pick-up trucks imported from Mexico.

The U.S. continues to be an alternative market for investment in the automotive sector. Foreign investment in the automotive sector continues to flow into the United States, including: BMW's investment in South Carolina to assemble passenger vehicles; Chrysler's reopening of its St. Louis, Missouri plant to produce minivans; GM's conversion of its Arlington, Texas plant to produce sport utility vehicles; the Mercedes plant in Alabama to assemble vehicles; Nissan's relocation of the production of its Altima engines from Mexico to a new plant in Decherd, Tennessee; and Toyota's construction of a new plant in Princeton, Indiana to build full-size pickups and a new plant in Buffalo, West Virginia to build engines.

While the vast majority of investment in North America is in the United States, some auto manufacturers have invested in Mexico prior to and following the implementation of NAFTA. This investment in Mexico reflects a number of factors. Expanded investments in Mexico by Nissan and VW were aimed at accommodating increased sales in Mexico as well as the addition of new model production. In 1994, BMW and Honda began construction of plants in Mexico to serve the growing Mexican market because Mexican automotive decrees effectively require the two companies to produce in Mexico if they want to sell there. The NAFTA requires Mexico to eliminate this local manufacturing requirement by January 1, 2004.

The NAFTA has created synergies in the North American automotive market that will help ensure a globally competitive U.S. automotive industry. U.S. parts manufacturers have been restructuring their investments in order to rationalize their production in all three countries. Most major parts producers now have plants in all three NAFTA countries. By lowering Mexican local content and trade balancing requirements during the period, NAFTA automotive provisions have stimulated investment in the U.S. market that might otherwise have gone to Mexico.

### ***Employment, Earnings, and Productivity***

During 1994-1996, overall employment in the U.S. automotive industry increased by 14.1 percent. Over the same period, U.S. employment in the automotive parts sector increased by 16.1 percent and employment in the motor vehicle assembly sector increased by 10.6 percent. U.S. productivity in

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<sup>48</sup> Source: Autofacts, Inc.

## SECTORAL TRADE

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the sector grew by 7 percent between 1993 and 1995 (latest figure available). In addition, hourly earnings for production workers grew by 5.6 percent between 1993 and 1996.

By contrast, Mexican employment in the automotive industry declined by 8.4 percent from 1993 to 1995.<sup>49</sup> This reflects the steep drop in Mexican demand due to the Mexican recession, combined with restructuring due in part to the liberalization of the auto decrees.

Canadian employment increased by 5 percent from 1993 to 1996. Employment in the automotive parts sector increased by 5.2 percent over the same period, and by 4.8 percent in the vehicle assembly sector.

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<sup>49</sup> Data for 1995 are estimated; 1996 employment data are not currently available.

## OPERATION AND EFFECT OF THE NAFTA

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### CHEMICALS AND ALLIED PRODUCTS

#### Sectoral Findings

- Between 1993 and 1996, U.S. chemicals<sup>50</sup> exports to Mexico rose from \$3.4 to \$5.1 billion, an increase of 50 percent. By comparison, U.S. exports to non-NAFTA countries grew by 37 percent.
  - U.S. petrochemical exports to Mexico grew by over 75 percent, to \$1.2 billion. As a result of NAFTA, Mexico opened its petrochemical sector for the first time to direct competition from U.S. firms, which helped to spur the growth of exports.
  - U.S. exports increased their share of Mexico's import market from 64 percent to 67 percent over the period.
- The NAFTA immediately eliminated Mexican tariffs on 31 percent of U.S. chemical exports previously subject to duty. Average Mexican tariffs on U.S. chemicals dropped from 10 to 4 percent over the period.
  - U.S. export growth is at least partly attributable to Mexican tariff and non-tariff barrier reduction under NAFTA.
  - Mexico immediately eliminated tariffs as high as 20 percent on close to half of U.S. pharmaceutical exports to Mexico.
- U.S. employment for production workers, hourly earnings, and productivity all increased modestly from 1993 to 1995.
- Imports from Mexico increased by \$0.6 billion, to \$1.4 billion from 1993 to 1996.
  - The NAFTA played virtually no role in the increase -- U.S. tariffs on chemicals prior to 1994 averaged only 1.0 percent.

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<sup>50</sup> The term "chemicals" as employed in this section means products produced in the chemicals and allied products sector, as defined in Standard Industrial Trade Classification (SITC) 5, rev. 3, including inorganic and organic chemicals (SITC 51), dyeing, tanning and coloring materials (SITC 53), medicinal and pharmaceutical products (SITC 54), fertilizers (SITC 56), plastics and plastic products (SITC 57 & 58), essential oils, toilet and polishing preparations (SITC 55), and chemical materials and products (SITC 59).

## SECTORAL TRADE

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- 11 -- Mexico served as a major source of plastic resins during a period of shortage in the United States. Many of the resins were converted into plastic parts in the United States and reexported.
- The NAFTA served to integrate further the Mexican and U.S. petrochemical industries, with Mexico supplying basic and primary products for manufacture in the United States into high value-added secondary petrochemicals.

### **Background**

The NAFTA created the world's largest open market for trade and investment in chemical products. North American chemical shipments in 1995 reached \$406.9 billion and are projected to exceed \$475 billion by the year 2000. U.S. production accounts for over 90 percent of these shipments. Mexico is the third largest market for U.S. chemicals and allied products, purchasing between 2 and 16 percent of U.S. chemical exports across all product categories in 1996.

### **Developments since NAFTA**

#### ***Highlights of NAFTA Implementation***

##### Tariff Cuts

Average Mexican tariffs on U.S. chemicals prior to NAFTA were 10.2 percent, including the 27 percent of U.S. exports to Mexico in the chemicals, rubber, and miscellaneous plastics sector which entered Mexico duty free. Tariffs on certain pharmaceutical products, however, were as high as 20 percent. The NAFTA immediately eliminated Mexican duties on another 31 percent of U.S. chemical products, reducing Mexican tariffs to an average of 4.0 percent. Tariffs on the remaining 41 percent of U.S. exports to Mexico in this sector are being phased out over five or ten year periods. By contrast, U.S. tariff rates on Mexican chemicals immediately prior to NAFTA averaged only 1.0 percent, thirty percent entered duty-free. The NAFTA immediately eliminated tariffs on most Mexican petrochemicals, inorganic and agricultural chemicals, as well as plastic and rubber products. Remaining U.S. tariffs on Mexican chemical products will be phased out over five to ten years.

##### Elimination of Non-Tariff Barriers

Prior to NAFTA, the Mexican Government exercised virtual monopoly control over the production, sale, and pricing of basic and secondary petrochemicals in Mexico. The NAFTA required Mexico to open petrochemical production and sales to U.S. and Canadian firms for all products of trade significance. That change has permitted American producers to sell high value-added petrochemical products directly to Mexican end-users for the first time.

## OPERATION AND EFFECT OF THE NAFTA

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The NAFTA also guaranteed the elimination of virtually all import licenses on chemicals, rubber and plastics, and pharmaceuticals.

The NAFTA's rules protecting intellectual property rights have been especially critical for the chemicals industry, which relies heavily on patent and trade secret protection to safeguard formulas and processes. The NAFTA ensures that Mexico will protect patents on production methods (so-called process patents), and places strict limits on subject matter that cannot be patented. These protections are particularly important for the chemical industry because process technology is critical to the manufacture of many chemical products. The NAFTA also guarantees strong product patent protection.

### *Trade Flows*

#### U.S. Exports to Mexico

U.S. exports to Mexico rose for nearly all chemical products between 1993 and 1996, growing from \$3.4 to \$5.1 billion, an increase of 50 percent. For the same period, U.S. chemical exports to countries outside North America increased by 37 percent, to \$45.3 billion. The 50 percent increase in U.S. chemical exports to Mexico was particularly impressive given that U.S. exports fell more than 3 percent in 1995 during the height of Mexico's recession.

During 1993-1996, the U.S. share of the Mexican chemical import market rose from 64 percent to 67 percent. In the first quarter of 1997, U.S. exports to Mexico were 71 percent greater than they were during the same period in 1993.

One sector that particularly benefitted following the entry into force of NAFTA was petrochemicals. Between 1993 and 1996, U.S. petrochemical exports to Mexico grew over 75 percent, to \$1.2 billion. U.S. exports to Mexico of plastics, synthetic resins, and rubber and industrial organic chemicals, in particular, also increased dramatically during the period.

#### U.S. Imports from Mexico

Mexican exports of chemical products to the United States rose from \$0.77 billion in 1993 to \$1.4 billion in 1996. Mexico's exports to the United States were mostly of primary and basic petrochemicals, such as plastic resins, of which there was a shortage in the United States. Mexico became a primary supplier of the resins, which were converted into plastic parts in the United States and reexported.

### *Investment*

Foreign-owned chemical firms continue to make very substantial investments in U.S. production plants, which they use to manufacture products for sale in the United States and abroad. At the same

## SECTORAL TRADE

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time, U.S. companies have continued to invest heavily both in the United States and abroad. In 1995, total investments by U.S. firms in chemical production outside the United States were \$68.1 billion, while foreign direct investment in the United States reached \$76.6 billion.

Simultaneous with this significant investment in U.S. chemical manufacturing, total U.S. direct investment in Mexico in the chemicals sector declined 47 percent from 1993 to 1995.

### *U.S. Employment, Earnings, and Productivity*

Overall U.S. employment in the chemicals industry during from 1993-1995 remained stable, with employment levels for production workers up 3 percent. Between 1993 and 1995 (the latest year available), productivity increased by 3.6 percent. Hourly earnings in the industry were up, by 2.1 percent.

## **OPERATION AND EFFECT OF THE NAFTA**

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### **COMPUTER EQUIPMENT AND SOFTWARE**

#### **Sectoral Findings**

- From 1993 to 1996, U.S. computer hardware exports to Mexico rose by 58 percent, reaching \$1.9 billion in 1996.
  - The increase would have been even greater but for a 14 percent decline in exports to Mexico in 1995, due to the Mexican recession.
  - Substantial Mexican tariff reductions on most U.S. equipment and software under NAFTA aided growth in U.S. exports.
  - In 1996, Mexico became the seventh largest market for U.S. computer hardware exports.
- Increased Mexican exports to the United States cannot be ascribed to NAFTA as almost two-thirds of Mexico's computer exports entered the United States duty-free prior to 1994.
- The NAFTA has supported a trend toward increased economic integration in North America and more efficient manufacturing operations. Mexico's assembly operations have spurred the creation of manufacturing plants in the United States that produce complex components and provide engineering and other high technology support.
  - Mexican imports of computer equipment appear to have displaced imports from other countries.
- From 1994 to 1996, employment rose 9 percent in the U.S. computer equipment industry to an estimated 218,000 employees.

#### **Background**

The U.S. computer equipment and software<sup>51</sup> sector has experienced strong growth over recent years. Worldwide, the computer equipment market (systems, peripherals, and parts) exceeded \$300 billion in 1996 and is projected to grow 10 percent per year through 2000.<sup>52</sup> U.S. companies and their

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<sup>51</sup> This section includes electronic computers (SIC 3571), computer storage devices (SIC 3572), computer terminals (SIC 3575), computer peripheral equipment (SIC 3577), computer programming services (SIC 7371), prepackaged software (SIC 7372), computer integrated systems design (SIC 7373), and computer processing and data preparation services (SIC 7374).

<sup>52</sup> Source: International Data Corporation, December 1996.

## SECTORAL TRADE

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overseas subsidiaries supply almost 70 percent of the global market, based on their strength in research and development, systems production, software development, marketing, and computer services. Computer equipment shipments from U.S.-based companies have grown 9.6 percent annually since 1990.

Software and computer services (consulting, operations management, training, and other services) are among the fastest growing industry sectors in the United States. Worldwide sales reached \$300 billion in 1996 and are expected to grow 11 percent annually over the next five years. U.S. packaged software vendors, with revenues of \$75 billion in 1995, supply almost 80 percent of the world market. Most software used around the world is developed in the United States.

### **Developments since NAFTA**

#### ***Highlights of NAFTA Implementation***

##### Tariff Cuts

Prior to NAFTA, almost 70 percent of U.S. imports of computer equipment and software from Mexico entered the United States duty-free. By contrast, Mexican tariffs on U.S. computer equipment and software ranged from 5 to 20 percent. Under NAFTA, Mexico is required to eliminate its tariffs on U.S. computers and software by January 1, 1998 on products that qualify under NAFTA rules-of-origin criteria. Mexico eliminated its duties on most computer equipment and on all software products on January 1, 1994 and is phasing out the duties on computer systems, impact printers, and certain other peripherals over a five-year period.

The NAFTA's rules-of-origin and duty drawback provisions work to encourage both domestic and foreign companies to produce computer products in North America. To qualify for NAFTA's preferential tariffs, products must be "substantially transformed" within the region. For example, personal computers must contain locally-made motherboards and be fully assembled in North America to benefit from NAFTA's preferential tariffs.

##### Elimination of Non-Tariff Barriers

The NAFTA contains a number of other provisions that help U.S. computer and software suppliers gain access to the Mexican market and compete against third-country products. Significant improvements in the areas of customs harmonization, government procurement, duty drawback, and standards have provided immediate benefits to both large and small U.S. computer businesses by reducing costs, making U.S. products more competitive in the Mexican market. The improved intellectual property protection guarantees included in NAFTA are particularly important to the U.S. computer equipment and software industries to guard against copyright and patent infringements.

## OPERATION AND EFFECT OF THE NAFTA

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### *Trade Flows*

#### U.S. Exports to Mexico

Following implementation of NAFTA, computer hardware exports to Mexico rose an average of 16.7 percent per year, reaching \$1.9 billion in 1996. These figures include a 14 percent decline in exports during 1995 due to a fall-off in Mexican demand as a result of Mexico's recession. U.S. computer makers shipped almost 112,000 personal computers to Mexico during the first quarter of 1996, almost twice the number shipped during the same time period in 1995. In 1996, Mexico became the seventh largest market for U.S. computer hardware exports, exceeding France for the first time. First quarter 1997 exports to Mexico were almost double first quarter exports in 1993.

While there are no official trade figures on U.S. software exports, sales to Mexico have been growing. Mexico's software market is forecast to grow 26 percent a year through 2000, twice the global average.

The United States continues to be the dominant source of computer systems and peripheral imports in Mexico. The U.S. maintained approximately 65 percent of the Mexican computer import market from 1993 to 1996, while Japan, South Korea, and Taiwan lost ground during the period.

#### U.S. Imports from Mexico

U.S. computer hardware imports from Mexico increased from \$0.9 to \$2.9 billion, from 1993 to 1996. A significant volume of these imports from Mexico are produced in assembly operations using complex components manufactured in the United States. For example, almost one-third of computer equipment imports entered the United States under special Mexican customs provisions that allow for duty-free entry of components into Mexico for use in the final assembly of products that are subsequently re-exported. When these goods re-enter the United States, special U.S. customs provisions assess duty only on the value added in Mexico. It appears that some of these imports displaced imports of products manufactured entirely outside the free trade area, and thus increased production in both Mexico and the United States.

### *Investment*

Capital expenditures on new plant and equipment by U.S.-based computer manufacturers, as well as overseas investments by these companies, have remained relatively steady during the 1990s. A significant amount of domestic spending has been directed toward automating production facilities to raise labor productivity, lower production costs, and accelerate time-to-market for new products. Overseas investment has been directed primarily to the European Union and to establishing offshore plants and distribution facilities in Asia. There has been no major increase in U.S. investment in Mexico's computer sector.

## SECTORAL TRADE

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### *Employment, Earnings, and Productivity*

From 1994 to 1996, employment in the computer equipment industry rose 9 percent to an estimated 218,000, reflecting the entry of new suppliers in certain high growth areas such as personal computers, networking, and multimedia applications. The number of production workers also increased 8 percent to 82,200, reflecting the expansion of some producers' U.S. manufacturing capacity to meet strong demand. U.S. manufacturers added 17,000 employees during the 1994-1996 period following the implementation of NAFTA. More than a third of these new hires were production workers.

Employment in the U.S. software industry has been rising 9 percent per year on average since 1990, reaching 616,000 in 1996. The recent gains have been due to growth in hiring by packaged software and programming services companies. From 1993 to 1995 (the latest year available), productivity was up by 67.8 percent while hourly earnings for production workers in the sector were up by 6.2 percent.

## **OPERATION AND EFFECT OF THE NAFTA**

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### **SELECTED CONSUMER GOODS**

This section of the study examines four consumer goods industries: household appliances; household and office furniture; printed products; and recreational equipment. These consumer goods sectors encompass some of the largest and most competitive industries in the United States.

#### **Sectoral Findings**

- Canada and Mexico are key export markets for the United States. In 1996, 39 percent of total U.S. exports of these goods were shipped to Canada and Mexico.
- The NAFTA gave U.S. exporters an advantage by dismantling Mexican trade barriers, which enabled U.S. producers to expand market share in Mexico and, in some sectors, export volume.
  - Before NAFTA, U.S. exports to Mexico in these sectors were subject to high import duties, generally 20 percent.
  - From 1993 to 1996, U.S. exports increased their share of the Mexican import market by 11 percentage points, growing from 57 percent to 68 percent of Mexican imports.
- By contrast, virtually all Mexican products covered by these four consumer products sectors entered the United States duty-free prior to NAFTA.
  - Thus, increases in Mexican shipments to the United States in these sectors during 1993-1996 were not linked to tariff reductions under NAFTA.
- U.S. export performance generally reflects the effect of Mexican tariff cuts in 1994, the peso crisis and subsequent recession in 1995, and the Mexican recovery in 1996.
  - In 1994, Mexico eliminated tariffs on many U.S. consumer goods and began phasing out tariffs on remaining products. Combined U.S. exports of these products to Mexico jumped 19 percent compared to export growth of only 3 percent to non-NAFTA countries.
  - With the devaluation of the peso in late 1994 and subsequent contraction of the Mexican economy, U.S. exports to Mexico declined 34 percent in 1995.
  - In 1996, as the Mexican economy began to recover, U.S. exports to Mexico rebounded 20 percent while U.S. exports to all countries increased only 3 percent.
- Without NAFTA, the decline in U.S. exports to Mexico would likely have been greater and more prolonged.

## SECTORAL TRADE

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- The NAFTA gave U.S. goods a tariff preference vis-a-vis other countries and prevented Mexico from raising tariffs and implementing other import barriers, as it had in previous economic recessions.

### HOUSEHOLD APPLIANCES

#### Background

The U.S. household appliance<sup>53</sup> industry is a strong global competitor in large appliances, such as refrigerators and clothes washers, with global exports of \$2.9 billion in 1996. In the 1970s and 1980s, the U.S. appliance industry went through a period of consolidation as the U.S. market became saturated and increasingly price competitive. The major U.S. companies are now rapidly expanding globally through both trade and investment. The NAFTA is particularly significant for this industry because Canada and Mexico are the two leading trade partners for the U.S. household appliance industry.

#### Developments since NAFTA

##### *Highlights of NAFTA Implementation*

##### Tariff Cuts

Before NAFTA, Mexican tariffs on U.S. home appliances ranged from 5 to 20 percent, with the majority at 20 percent. By contrast, most Mexican appliances entered the United States duty free under GSP.

In 1994, when NAFTA was implemented, Mexico immediately eliminated tariffs on about 17 percent of appliances imported from the United States. Mexico will phase out tariffs on another 17 percent of appliances imported from the United States by January 1, 1998 and all remaining tariffs by January 1, 2003. The NAFTA tariff preference gives U.S. appliances a substantial price advantage over non-NAFTA appliances, which will generally still face tariffs of 20 percent.

##### Elimination of Non-Tariff Barriers

As of January 1, 1997, Mexico implemented NAFTA provisions enabling companies to obtain certifications from accredited, local testing laboratories that their goods satisfy governmental product standards in all three NAFTA countries. This change is possible because laboratories in the United States can apply for accreditation in Mexico on the same basis as Mexican laboratories. Once

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<sup>53</sup> This section examines the entire household appliances sector (SIC 363).

## **OPERATION AND EFFECT OF THE NAFTA**

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accredited, a U.S. laboratory is able to test and certify a product for sale in the United States, Canada, and Mexico, significantly reducing certification costs and time to market for U.S. producers.

The NAFTA improves protection for intellectual property rights in Mexico's market. The U.S. household appliance industry relies on patent, trademark, and trade secret protection to protect key technologies and safeguard commercial reputations.

In addition, NAFTA phases out most trade-distorting Mexican performance requirements as a condition for government approval of foreign investments, including domestic sales restrictions, local content rules, technology transfer requirements, product mandating rules, and trade balancing requirements. The elimination of Mexican domestic sales restrictions has been particularly beneficial to U.S. appliance manufacturers that operate maquiladora plants, which formerly were required to sell most of their production outside Mexico and now are able to sell directly to Mexican consumers.

### ***Trade Flows***

#### **U.S. Exports to Mexico**

After reaching record levels in 1993 (\$472 million), U.S. exports of appliances to Mexico fell to \$330 million in 1995 due to the severe recession that followed Mexico's 1994 peso devaluation. A steep drop in real income in Mexico during the recession prompted Mexican consumers to cut back severely on major purchases such as large appliances. Recovery in Mexican consumer demand for appliances began in 1996, and U.S. appliance exports increased to \$375.8 million -- up by 14 percent from 1995.

#### **U.S. Imports from Mexico**

Mexican imports of household appliances as a share of U.S. imports have increased by 2 percentage points to 20 percent of total imports since NAFTA. Imported appliances from Mexico are produced primarily in U.S.-Mexican joint venture plants or in plants controlled entirely by U.S. or third country manufacturers. The appliance categories with the largest increases of shipments to the United States over the past three years were stoves, refrigerators, and vacuum cleaners. Since these categories of imports from Mexico were entering the United States duty-free in 1993, NAFTA was not a factor in the increased imports. Increased imports were due primarily to overall strength of consumer demand in the United States during the period and the peso devaluation.

### ***Investment***

U.S. capital expenditures in the domestic appliance industry increased from \$450 million in 1989 to \$632 million in 1995, an increase of 40 percent. This increase reflects strong growth in the U.S. economy in recent years with U.S. appliance production at record levels. U.S. investments in the

## SECTORAL TRADE

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Mexican appliance industry increased 40 percent between 1989 and 1990, but have remained relatively flat since then. In 1995, U.S. investments totaled \$267 million, an increase of just 2 percent from 1990 levels.

### *Employment, Earnings, and Productivity*

In 1993, the U.S. appliance industry employed 104,600 workers. Employment has grown moderately in recent years, totaling 110,300 employees in 1996. From 1993 to 1995 (the latest year for which data is available), hourly earnings for production workers in the U.S. appliance industry rose by 3.4 percent while productivity was up 3.1 percent.

## HOUSEHOLD AND OFFICE FURNITURE

### **Background**

Canada and Mexico have long been leading destinations for U.S. furniture exports.<sup>54</sup> In 1996, total U.S. exports of household and office furniture were \$1.8 billion, of which 46 percent -- or \$829 million -- were directed to Canada and Mexico.

### **Developments since NAFTA**

#### *Highlights of NAFTA Implementation*

The NAFTA made no change in U.S. import duties on Mexican furniture, as these products entered the United States duty free under GSP prior to 1994. By contrast, prior to NAFTA, Mexican tariffs on U.S. furniture ranged from 10 to 20 percent. When NAFTA went into effect on January 1, 1994, Mexico immediately eliminated duties on 18 percent of U.S. furniture exports and began a five-year phase-out of tariffs for another 8 percent of U.S. exports and a ten-year phase out for the remaining U.S. exports.<sup>55</sup>

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<sup>54</sup> This section examines household furniture (SIC 251) and office furniture (SIC 252).

<sup>55</sup> In 1996, in response to a U.S. safeguard action on broom corn broom imports, Mexico raised its import tariffs on U.S. exports of several products. As part of this increase, Mexico raised its tariffs on wooden bedroom and office furniture to 14 percent and 12 percent ad valorem, respectively. These products account for 7.2 percent of total U.S. household and office furniture exports to Mexico.

## **OPERATION AND EFFECT OF THE NAFTA**

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### ***Trade Flows***

#### **U.S. Exports to Mexico**

During the first year of NAFTA's implementation, U.S. furniture exports to Mexico grew 33 percent, from \$197.1 million to \$262.7 million. They then fell 56 percent in 1995 as a result of the Mexican recession. As the Mexican economy began to emerge from the recession, exports grew by 12 percent in 1996.

Even though U.S. furniture exports have declined as a result of the Mexican recession, they fared much better than exports from other countries. Specifically, U.S. exports (down 19.5 percent) fell by far less than did European (down 27.6 percent) and Asian (down 57.7 percent) exports, and U.S. exports increased their share of the Mexican import market by 5 percent from 1993, capturing 79 percent in 1996.

#### **U.S. Imports from Mexico**

U.S. imports of Mexican furniture increased from \$241 million in 1993 to \$486.4 million in 1996. The increased imports, however, were not attributable to NAFTA, as all U.S. imports of furniture from Mexico entered duty-free prior to 1994. Instead, increased imports from Mexico were the result of the devaluation of the peso in response to Mexico's fiscal crisis, and strong U.S. demand, which also spurred imports from Canada and many non-NAFTA countries.

### ***Investment***

No data are available for this sector with respect to investments in the United States or Mexico from 1993 to 1996.

### ***Employment, Earnings, and Productivity***

In 1993, the U.S. household and office furniture sector employed approximately 324,500 workers, including 269,000 production workers. By 1995, the number of employees had risen to 341,600, including 285,500 production workers -- an increase of 5.3 percent and 6.1 percent, respectively. Productivity in the U.S. furniture industry sector fell by 0.6 percent between 1993 and 1995 (the latest year for which data is available), but hourly earnings for production workers increased by 2.1 percent.

## SECTORAL TRADE

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### PRINTED PRODUCTS

#### Background

The U.S. printing and publishing industry,<sup>56</sup> with estimated 1996 total shipments of \$200.7 billion, ranks with Germany as the world's largest exporter of printed products. However, exports of printed products accounted for just under 2 percent of the industry's total shipments in 1996. Canada has long been the largest foreign market for U.S. printed products, with 1996 sales of \$1.9 billion, accounting for 44 percent of all U.S. exports. Since 1989, Mexico has moved past Germany, Australia, and Japan to become the third largest market for U.S. printed product exports, behind only Canada and the United Kingdom. Exports of U.S. printed products to Canada and Mexico increased from 49 percent in 1993 to 51 percent in 1996.

#### Developments since NAFTA

##### *Highlights of NAFTA Implementation*

##### Tariff Cuts

Under NAFTA, Mexico immediately eliminated tariffs ranging from 10 to 20 percent on 63 percent of all U.S. printing and publishing exports. Mexico will phase out its tariffs on another 8 percent of U.S. printing and publishing exports by January 1, 1998 and on the remaining 29 percent of U.S. exports in this sector over ten years, with some products becoming duty-free in as early as eight years.

By contrast, 66 percent of U.S. imports from Mexico entered duty free prior to NAFTA. Upon implementation of NAFTA, the United States eliminated tariffs on an additional 24 percent of Mexican imports. For the remaining 10 percent of U.S. imports -- for which tariff rates are no higher than 7 percent -- duties will be eliminated by January 1, 1998.

##### Elimination of Non-Tariff Barriers

Of particular importance to the printing and publishing industry were improvements in Mexican copyright and trademark protection. Also important were NAFTA-induced changes to Mexican labeling and foreign investment restrictions. As a result of NAFTA, Mexico now permits majority foreign ownership in newspaper enterprises engaged in simultaneous printing and distribution in Mexico of newspapers published outside of Mexico. Also pursuant to NAFTA, Mexico removed its restrictions regarding the editing of Mexican newspapers and periodicals by non-citizens.

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<sup>56</sup> This section covers the entire U.S. printing and publishing industry (SIC 27).

## OPERATION AND EFFECT OF THE NAFTA

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### *Trade Flows*

#### U.S. Exports to Mexico

The NAFTA's benefits to U.S. printers and publishers were apparent in its first year of NAFTA operation. Although some products in this sector enjoyed duty-free treatment prior to NAFTA, Mexico was not generally viewed as an attractive market. The negotiation of NAFTA played an important role in changing this view. U.S. exports to Mexico rose to \$333.0 million in 1994, up from \$258.4 million in 1993 -- a gain of 29 percent. The growth of exports in 1994 was primarily in those items (*e.g.*, trade advertising materials) for which duties were removed under NAFTA.

Mexico's peso crisis in late 1994, which led to a deep recession in 1995, had an immediate adverse effect on U.S. trade with Mexico in the sector. Exports of U.S. printed products dropped by 23 percent in 1995. Much of the loss was recouped during 1996, with exports of U.S. printed products to Mexico rising to \$309.1 million, a gain of 21 percent over 1995. The increase in exports during 1996 paralleled a general recovery of the Mexican economy. Exports in the first quarter of 1997 were 31 percent greater than the first quarter of 1997.

As in other consumer goods sectors, Mexico's preferential reduction of tariffs on U.S. printed products under NAFTA resulted in a significant increase in the U.S. share of Mexico's import market in this sector. U.S. printed products accounted for 78.1 percent of Mexican imports in 1996, up from 62.5 percent in 1993, as Mexican buyers switched from third country imports to more competitively priced U.S. products.

#### U.S. Imports from Mexico

While imports of printed matter from Mexico rose to \$120.3 million in 1996, these increases appear to have been due to other factors, such as currency changes and the strength of the U.S. economy during the period, given that approximately 66 percent of all U.S. imports from Mexico in the printing and publishing sector entered duty-free prior to NAFTA.

### *Investment*

In response to technological change, U.S. printers and publishers are replacing their analog production systems with more productive digital systems. The industry's capital expenditures in the United States jumped to \$5.6 billion in 1994, an increase of 14 percent over 1993 expenditures of \$4.8 billion. Data for the most recent year, 1995, show capital expenditures maintaining the 1994 level of \$5.6 billion.

Investment by U.S. printers and publishers in Mexico peaked at \$107 million in 1993, declining to \$93 million in 1994 and \$74 million in 1995.

## SECTORAL TRADE

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### *Employment, Earnings, and Productivity*

Despite a near doubling in the number of establishments, employment in the U.S. printing and publishing industry has remained stable at approximately 1.5 million since the late 1970s. Capital expenditures for new equipment have increased U.S. output and productivity and reduced requirements for production worker staffing. Between 1993 and 1995 (the latest year for which data is available), productivity declined by 1.8 percent in the printing and publishing industry. Wages for production workers were up 1.7 percent.

## RECREATIONAL EQUIPMENT

### **Background**

The United States is one of the leading exporters of recreational equipment,<sup>57</sup> with exports to the world totaling \$4.7 billion in 1996. In 1996, U.S. exports of recreational equipment to Mexico and Canada were \$1.1 billion, or 23 percent of total U.S. exports and 5 percent of U.S. product shipments.

U.S. manufacturers of recreational equipment view Mexico as one of the most important emerging markets for their products given a number of developments in Mexico that will spur demand for recreational equipment. Mexican consumers are expected to have more disposable income over time; 57 percent of Mexico's population is under 25 years of age; Mexican developers are building new golf courses, marinas, and other recreational amenities for tourists; and U.S. professional sports leagues are beginning to pursue the Mexican market.

### **Developments since NAFTA**

#### *Highlights of NAFTA Implementation*

##### Tariffs

All imports of recreational equipment from Mexico entered the United States duty free prior to NAFTA. By contrast, Mexican tariffs on imports of U.S.-made recreational equipment ranged from 10-20 percent. Mexico reduced many of these tariffs to zero immediately following NAFTA's implementation. Most of the remaining tariffs are currently less than 10 percent and will be phased out by January 1, 1998, or January 1, 2003.

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<sup>57</sup> This section examines sports and athletic equipment (SIC 3949), dolls (SIC 3942), toys and games (SIC 3732), motorcycles and parts (SIC 37512), and bicycles and parts (SIC 37511).

## **OPERATION AND EFFECT OF THE NAFTA**

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### **Elimination of Non-Tariff Barriers**

The NAFTA also addressed non-tariff barriers of concern to the recreational equipment industry. The improved intellectual property protection guarantees included in NAFTA are particularly important to this industry, which relies heavily on trademark protection to safeguard internationally known trade names and to ensure product quality.

The NAFTA standards provisions also are of particular interest to the recreational equipment industry because Mexico's mandatory safety regulations and labeling requirements have impeded imports. NAFTA's rules regarding the establishment of product standards ensure that Mexico employs transparent and non-discriminatory procedures that permit U.S. manufacturers to comment on proposed Mexican regulations and require the Government to consider these comments before implementing new regulations.

### ***Trade Flows***

#### **U.S. Exports to Mexico**

Despite Mexico's severe recession, U.S. recreational equipment exports to Mexico grew at an annual rate of 6 percent from 1993 to 1996 -- reaching \$265.3 million in 1996. U.S. exports to Mexico grew 38 percent in 1994 reaching \$311.5 million. Following the peso crisis in late 1994, however, many Mexican consumers could not afford to purchase discretionary products like recreational goods, and U.S. exports declined 37 percent. Hardest hit were boat and motorcycle imports. With improving economic conditions in Mexico, U.S. exports of recreational equipment increased 34 percent, exceeding pre-NAFTA levels. U.S. exports of sports equipment to Mexico grew to a record-level \$154 million in 1996, reflecting a 24 percent annual growth rate from 1993 to 1996. U.S. exports to Mexico increased 63 percent in the first quarter of 1997 compared to the first quarter of 1993.

The U.S. share of the Mexican import market for recreational equipment (not including boats) grew from 41 percent in 1993 to 49 percent in 1996. It is estimated that the U.S. share of the Mexican import market for boats was 85 percent or more.

#### **U.S. Imports from Mexico**

U.S. recreational equipment imports from Mexico grew at an annual rate of 26 percent from 1993 to 1996, reaching \$743 million in 1996. This increase in imports cannot be attributed to the tariff reductions under NAFTA as all of these products entered the United States duty free prior to 1994. Rather, it reflects the strong economic growth and consumer demand in the United States over the past three years. U.S. imports of toys, sports equipment, and bicycles from Mexico each grew

## SECTORAL TRADE

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approximately 28 percent while imports of boats, motorcycles, and dolls declined over the same period.

### *Employment, Earnings, and Productivity*

U.S. employment in the recreational equipment industries increased an estimated 2 percent annually from 1993 to 1996, to a total of 173,600 workers. Between 1993 and 1995 (the latest year for which data is available), productivity in the recreational equipment sector was up by 3.9 percent while hourly earnings were up by 5 percent. Estimated employment in Mexico declined 8 percent annually over the same period.

## OPERATION AND EFFECT OF THE NAFTA

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### ELECTRONIC COMPONENTS

#### Sectoral Findings

- U.S. electronic component manufacturers<sup>58</sup> exported \$5.5 billion to Mexico in 1996, up \$3.4 billion since 1993, reflecting an annual growth rate of 36.9 percent over the period.
  - Although the high growth rate cannot be attributed solely to NAFTA, Mexican tariff cuts under NAFTA clearly stimulated U.S. electronic component exports to Mexico.
  - Mexican tariffs on U.S. electronic components averaged 15 percent in 1993. Under NAFTA, Mexico immediately eliminated its tariffs on nearly 50 percent of U.S. imports.
  - Mexico was the largest market for U.S. exports of electronic components in 1996.
- Mexican exports to the United States rose by 41 percent from 1993 to \$3.1 billion in 1996, reflecting an annual growth rate of 12.1 percent per year.
  - This increase in imports resulted primarily from the strong growth in the U.S. economy and not NAFTA, as most electronic component imports entered the United States duty-free prior to NAFTA.
- NAFTA has enabled American companies to realize synergies in the North American market, boosting global competitiveness.
  - The United States provides an overwhelming share of the electronic components assembled into computers and other electronic products in Mexico.
  - Mexican tariff reductions under NAFTA reduced the cost of U.S. components finished products, making them more cost competitive against imports from other countries, which do not contain U.S. components.
- U.S. jobs in the electronic components sector began to climb in and reached a total of 613,000 by the end of 1996.

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<sup>58</sup> This section covers electron tubes (SIC 3671), printed circuit boards (SIC 3672), semiconductors and related devices (SIC 3674), electronic capacitors (SIC 3675), electronic resistors (SIC 3676), electronic coils, transformers, and other inductors (SIC 3677), electronic connectors (SIC 3678), and electronic components not elsewhere classified (SIC 3679).

## SECTORAL TRADE

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### **Background**

Electronic components are the fundamental building blocks of all the finished electronic products and systems in use today, from automotive ignition systems to radar systems to video games. From 1989 through 1993, U.S. shipments of electronic components recorded an annual growth rate of 7.3 percent. Growth in this sector accelerated from 1993 through 1996, when electronic component shipments achieved an annual growth rate of 19.0 percent. Total U.S. shipments of electronic components were estimated at \$120 billion in 1996. U.S. shipments are expected to reach \$150 billion in 1998 and to grow by an average of 13 percent annually through 2002. The strong performance of the U.S. economy from 1993 to date has been the primary driver of recent growth in the U.S. electronic components sector, as well as import growth from Mexico and other countries.

### **Developments since NAFTA**

#### ***Highlights of NAFTA Implementation***

##### Tariff Cuts

Mexican tariffs on U.S. electronic components averaged 15 percent prior to NAFTA. Mexico eliminated its tariffs on roughly 49 percent of U.S. electronic component exports (including capacitors, switches, piezoelectric crystals, semiconductors, and some resistors and tubes) after NAFTA went into effect in 1994. Mexico will provide duty-free treatment for most of the remaining 51 percent of U.S. electronic component exports by January 1, 1998, with the rest duty-free by January 1, 2003. U.S. tariffs on most electronic components were already at zero prior to NAFTA.

##### Elimination of Non-Tariff Barriers

Prior to NAFTA, Mexican regulations prohibited Mexican plants involved in production sharing (maquiladoras) from selling to the Mexican market. The NAFTA requires Mexico to phase out this restriction by January 1, 2001, thereby allowing maquiladoras to sell into Mexico and not just the U.S. As required by NAFTA, Mexico already has raised to 70 percent the amount of product that may be shipped to domestic buyers from maquiladoras.

While a sizable portion of U.S. electronic component exports to Mexico is currently reexported to the United States, the progressive removal of restrictions on maquiladora sales will allow a greater share of maquiladora output to be sold directly to the growing number of electronic product manufacturers in Mexico, thus helping to spur sales of U.S. electronic components included in those products and increasing the competitiveness of both U.S. and Mexican producers.

## **OPERATION AND EFFECT OF THE NAFTA**

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### ***Trade Flows***

The NAFTA tariff reductions, together with those resulting from the Uruguay Round, have helped to spur U.S. and global trade in electronic components. The Information Technology Agreement (ITA), which will eliminate tariffs around the world on a broad range of components, finished products and production equipment by the year 2000, is expected to increase demand further.

#### **U.S. Exports to Mexico**

Mexico was the largest market for U.S. producers of electronic components in 1996. American companies exported \$5.5 billion in electronic components to Mexico in 1996, up from \$2.1 billion in 1993. Exports surged to \$1.5 billion in the first quarter of 1997, up 210 percent from the first quarter of 1993. Since implementation of NAFTA, U.S. electronic component sales to Mexico have outpaced exports to the rest of the world. From 1993 to 1996, U.S. exports to Mexico grew at almost twice the rate of exports outside North America.

The United States remains Mexico's principal supplier of electronic components. According to official Mexican data, in 1996 the U.S. supplied roughly 81 percent of Mexican imports of electronic components.

#### **U.S. Imports from Mexico**

Mexico ranked seventh as a source of U.S. imports in 1996, supplying \$3.1 billion in electronic components, up from \$2.2 billion in 1993.

### ***Investment***

The NAFTA enabled U.S. investors in Mexico to hold 100 percent of the ownership of new electronic production enterprises, without prior government approval. Prior to NAFTA, U.S. investors were limited to a 49 percent equity share unless their plants met government-mandated performance requirements and restrictions.

The U.S. electronic components sector invested \$11.4 billion in plant and equipment in the United States during 1995, the latest year for which such data are available. No comparable data are available for U.S. direct investment in Mexico's electronic components sector.

### ***Employment, Earnings, and Productivity***

The U.S. electronic component industry benefits from a highly educated labor force and the availability of large numbers of top-quality electrical engineers. U.S. employment in the industry increased from 527,400 in 1992 to nearly 613,000 by the end of 1996. This job growth parallels the

## SECTORAL TRADE

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growth in electronic component exports to both Canada (to which U.S. exports rose by 62 percent over the period) and Mexico.

Productivity in the U.S. electronic component sector rose by 39.7 percent from 1993 to 1995 (latest year available) while hourly earnings were up by 3.6 percent.

## **OPERATION AND EFFECT OF THE NAFTA**

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### **PROCESSED FOODS AND BEVERAGES**

#### **Sectoral Findings**

- U.S. exports of processed foods and beverages<sup>59</sup> to Mexico grew by 20 percent from 1993-1994 to a total of \$2.4 billion. Because of the Mexican recession, U.S. exports dropped in 1995 to \$1.65 billion. Exports then increased by 22 percent in 1996 to \$2.0 billion.
- U.S. imports from Mexico rose from \$1.1 billion to \$1.8 billion over the same period.
- The NAFTA increased opportunities for U.S. processed food and beverage exports to Mexico.
  - Prior to NAFTA, Mexican tariffs were 10-20 percent, with only 12 percent of U.S. products entering Mexico duty free.
  - By contrast, close to 30 percent of Mexican products entered the United States duty free, and all but one of the remaining product categories faced low tariffs of between zero and 10 percent.
  - The positive effects of Mexican tariff reductions on U.S. exports will be greater in the future as Mexico phases out most remaining duties over the next six to nine years.
- The NAFTA has helped level the playing field for U.S. products. It removed Mexican import licensing requirements and required Mexico to make transparent its regulations for product testing, certification, and labeling. The NAFTA affords stronger trademark protection in Mexico, helping U.S. producers to differentiate products, demonstrate product quality and strengthen market share.
- From 1993 though 1995, annual U.S. investments in Mexico's processed foods sector fluctuated between \$2.3 to \$2.8 billion dollars. Capital expenditures by U.S. firms in the United States, which totaled \$11.9 billion in 1995, far exceeded U.S. investment in Mexico. Foreign direct investment inflow to the U.S. was \$5 billion in 1995.
- Between 1994 and 1995, U.S. employment in the sector grew by 15,000 workers to more than 1.5 million.

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<sup>59</sup> This section covers the entire processed food and beverage group (SIC 20).

## SECTORAL TRADE

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### **Background**

The U.S. processed food and beverage industry accounts for more than one-sixth of the nation's industrial activity, with estimated shipments of \$471 billion in 1996. The U.S. processed food and beverage industry is also a major participant in the global economy, accounting for about one-fourth of the industrialized world's total production of processed foods and beverages.

Recognizing that the U.S. domestic market is expanding slowly, growing only 3.7 percent annually since 1993, many U.S. food and beverage processors have emphasized export sales to rapidly growing foreign markets. Since 1993, exports have grown at an annual rate of 8.7 percent, reaching \$29.7 billion in 1996. Exports now account for almost seven percent of shipments, up from 5.8 percent in 1993. Since 1993, total U.S. food and beverage imports have grown at an annual rate of 8.2 percent, reaching \$26.5 billion in 1996.

### **Developments since NAFTA**

#### ***Highlights of NAFTA Implementation***

##### Tariff Cuts

Prior to NAFTA, 28 percent of U.S. imports from Mexico entered the United States duty-free and 12 percent of U.S. exports entered Mexico duty-free. As to the remaining imports, U.S. tariffs ranged from zero to 10 percent for virtually all processed foods, except for the 38 percent tariff on frozen orange juice concentrate. By contrast, Mexican tariffs on most processed foods and beverages were 20 percent. The NAFTA immediately eliminated tariffs on 3 percent of all U.S. exports to Mexico, and will eliminate tariffs on an additional 4 percent over a five-year period, 46 percent more over a 10-year period, and the remainder over a 15-year period.

##### Elimination of Non-Tariff Barriers

The NAFTA eliminated and prohibited the reimposition of Mexican import licenses on processed food and beverages. Prior to NAFTA, Mexico used licenses to restrict imports of a large number of products such as powdered milk.

The NAFTA's rules regarding product standards also are of particular interest to the U.S. processed food and beverage industry because it depends on transparent requirements for product testing, certification, and labeling. In the past, Mexico's imposition of mandatory health regulations and labeling requirements impeded access to the Mexican market. The NAFTA's standards provisions require Mexico to employ transparent and non-discriminatory procedures for establishing product and labeling requirements, and to solicit and take into account comments from U.S. manufacturers prior to establishing new requirements.

## **OPERATION AND EFFECT OF THE NAFTA**

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The NAFTA provisions on intellectual property also are important to the processed foods and beverages industry, which relies heavily on trademarks to differentiate products, demonstrate product quality, and maintain market share. Also under NAFTA, Mexico recognized “Bourbon” and “Tennessee Whiskey” as distinctive products of the United States.

### ***Trade Flows***

#### **U.S. Exports to Mexico**

During the first year of NAFTA, U.S. exports of processed foods to Mexico grew 20.5 percent, reaching almost \$2.4 billion. In 1995, exports to Mexico fell 31.3 percent due to the Mexican recession.

In 1996, while total U.S. processed food and beverage exports grew only 3.1 percent, U.S. exports to Mexico grew 21.7 percent, reaching \$2.0 billion. Although most of the gains were in lower value-added items, future growth is expected in higher value-added items such as snack foods, as the Mexican middle-class recovers from the recession. By the end of 1997, U.S. exports to Mexico are expected to grow another 20 percent, once again reaching \$2.4 billion.

#### **U.S. Imports from Mexico**

Between 1993 and 1996, imports of processed food and beverages from Mexico grew 58 percent, reaching \$1.8 billion. Mexico’s share of the U.S. market rose modestly, most likely due to currency factors and the strength of the U.S. economy, since the U.S. did not make major changes in tariff levels during this period.

### ***Investment***

U.S. direct investments in the Mexican food and beverage industry totaled \$2.3 billion in 1993, rose to \$2.8 billion in 1994, and then declined to \$2.3 billion in 1995. Currently, more than 25 percent of total U.S. direct investment in Mexico falls in the food and beverage sector. Capital expenditures in the U.S. by the U.S. domestic food and beverage industry increased from \$10.1 billion in 1994 to \$11.9 billion in 1995.

### ***Employment, Earnings, and Productivity***

Employment in the U.S. processed food sector was 1.5 million in 1995, reflecting a compound annual growth rate of 1 percent since 1989. From 1993 to 1995, employment in the Mexican processed food and beverage industry fell by more than 13,000 workers to approximately 340,000.

## SECTORAL TRADE

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Between 1993 and 1995 (latest year available), productivity in the processed food and beverage industry was up by 4.1 percent, hourly earnings also grew by 3.8 percent.

## OPERATION AND EFFECT OF THE NAFTA

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### TELECOMMUNICATIONS EQUIPMENT

#### Sectoral Findings

- U.S. telecommunications equipment<sup>60</sup> exports to Mexico rose 35 percent in the first year after NAFTA, but were adversely affected by Mexico's recession in 1995, but then recovered in 1996 to pre-NAFTA levels. They continue to grow in 1997.
  - U.S. exports to Mexico in the first quarter of 1997 were 7 percent greater than U.S. exports to Mexico during the first quarter of 1993.
- Despite lower sales following Mexico's recession, the U.S. share of Mexico's import market climbed from 64 percent in 1993 to 85 percent in the first half of 1996.
  - This increase was largely attributable to tariff preferences conferred on U.S. exports by Mexican tariff reductions under NAFTA.
  - Under NAFTA, Mexico immediately eliminated 15 percent average import tariffs on more than 80 percent of U.S. telecommunications equipment.
- Imports from Mexico increased from \$545.9 million in 1993 to \$2.2 billion in 1996 in response to a rapidly growing U.S. market, displacing Asian imports in the United States.
  - Mexican imports tend to have a higher U.S. content than imports from other countries.
  - Virtually all Mexican telecommunications equipment entered the United States duty-free prior to 1994, thus the increase in Mexican imports was not attributable to NAFTA.
  - Mexico gained market share in the United States due in part to efficient U.S.-Mexican cross-border manufacturing operations that produce cost competitive products with high U.S.-content.
- U.S. employment has remained steady at 216,000 in the rapidly growing telecommunication equipment industry, reflecting substantial productivity gains.

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<sup>60</sup> This section covers telephone and telegraph apparatus (wireline) (SIC 3661) and radio and television broadcasting and communication equipment (wireless) (SIC 3663), excluding camcorders and including optical fiber and coaxial cable.

## SECTORAL TRADE

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### **Background**

The United States is the single largest market for telecommunications equipment in the world, with imports accounting for one-fourth of U.S. purchases. The sector has enjoyed strong growth over the past years, with domestic consumption rising from \$37.6 billion in 1993 to \$48.2 billion in 1996.

The U.S. share of Mexico's total telecommunications equipment market traditionally has been high, averaging more than 50 percent of Mexican imports. U.S. suppliers have maintained this strong presence in the Mexican market notwithstanding Europe's traditional dominance in certain subsectors due to Mexico's adoption of European standards for wireline equipment.

### **Developments since NAFTA**

#### ***Highlights of NAFTA Implementation***

##### Tariff Cuts

Virtually all Mexican telecommunications equipment exports entered the United States duty-free prior to NAFTA. By contrast, Mexico levied tariffs of 15-20 percent on telecommunications equipment imported from the United States. The NAFTA immediately eliminated Mexican import tariffs on exports of more than 80 percent of U.S. telecommunications equipment products. Remaining tariffs, currently ranging up to 14 percent, are being phased out over 10 years.

##### Elimination of Non-Tariff Barriers

The NAFTA required Mexico to eliminate all performance requirements on maquiladoras immediately and strictly limit duty drawback. Additionally, restrictions on maquiladora sales into the Mexican market are required to be phased out over a seven-year period, by 5 percent per year. U.S. companies benefit from the elimination of these trade-distorting elements of Mexico's maquiladora policies, which have precluded sales of maquiladora products in Mexico.

In a significant change under NAFTA, a single lab can now certify a telecommunications product for sale in any of the three NAFTA countries. This change allows U.S. companies to reduce the total cost of exporting when they are able to use test equipment in U.S. labs for exports to Mexico.

### ***Trade Flows***

##### U.S. Exports to Mexico

U.S. telecommunications equipment exports to Mexico increased from \$977.2 million in 1993, the year before NAFTA took effect, to \$1.3 billion in 1994. This 35 percent increase was about 10

## **OPERATION AND EFFECT OF THE NAFTA**

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percentage points greater than the increase in U.S. telecommunications equipment exports to all countries that year. In 1995, however, U.S. exports of telecommunications equipment to Mexico dropped to \$946.7 million, reflecting the sharp downturn in the Mexican economy and the effects of the peso devaluation. Exports began to rise again in 1996, reaching \$961.2 million, representing six percent of total U.S. telecommunications equipment exports. First quarter 1997 figures place U.S. exports at seven percent above the comparable period in 1993.

The U.S. share of the Mexican market increased from 64 percent in 1993 to 85 percent in 1996. This increased market share is an indicator of the positive effect NAFTA had on U.S. competitiveness in the Mexican market. The NAFTA tariff cuts helped U.S. exporters gain an advantage over non-NAFTA producers.

### U.S. Imports from Mexico

While imports of Mexican telecommunications equipment grew during the 1994 to 1996 period, this equipment was largely duty-free prior to NAFTA. Mexican import increases parallel import increases from other parts of the world, reflecting the strong U.S. demand, which climbed from \$37.6 billion in 1993 to \$48.2 billion in 1996.

Mexico's share of U.S. equipment imports increased from 10 percent in 1994, to 14 percent in 1995, and once again in 1996 to 16 percent and displaced other suppliers, particularly Japan. Japan's exports to the United States dropped significantly from 1993 to 1996 as the yen appreciated and more competitors entered the market. Because the U.S.-content of Mexican imports tends to be larger than that of imports from other countries, increased telecommunications equipment imports from Mexico means greater exports by U.S. component manufacturers to Mexico.

### ***Investment***

Prior to NAFTA, Mexico had a history of discrimination and barriers against foreign investment, using direct restrictions and performance requirements to extract concessions. The NAFTA lifted most restrictions on foreign investment, including the 49 percent cap on foreign participation in the enhanced telecommunications services sector and provided greater protection for investors in all telecommunications services sectors, including basic telecommunications services.

No data are available regarding levels of investment in the U.S. or Mexican telecommunications equipment markets during the period 1993 to 1996.

### ***Employment, Earnings, and Productivity***

Employment in the telecommunications industry remained stable for the period 1992-1996. Because the telecommunications industry is technology-driven and historically have been subject to high productivity growth, employment levels have stayed relatively flat compared to more labor-intensive

## **SECTORAL TRADE**

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industries. In the United States, employment dropped from 235,000 in 1989 to 216,000 in 1992, and held steady at that level through 1996, notwithstanding mergers, consolidations, and downsizing.

Productivity in the U.S. telecommunications industry was up by 25.4 percent between 1993 and 1995 (latest year available) while hourly earnings were up by 7.7 percent.

## OPERATION AND EFFECT OF THE NAFTA

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### TEXTILES AND APPAREL

#### Sectoral Findings

- The United States is the largest intra-North American exporter of textiles and apparel,<sup>61</sup> accounting for \$5.6 billion, or 45 percent of the total in 1996.
  - U.S. exports to Mexico between 1993 and 1996 rose by 79 percent, to \$2.8 billion. Exports to Canada grew by 39 percent, rising to \$2.7 billion.
  - Mexico's exports to the United States increased from \$1.4 billion in 1993 to \$4.2 billion in 1996. Canada's exports to the United States rose from \$1.0 billion to \$2.0 billion over the same period.
- Combined textile and apparel trade among the United States, Mexico, and Canada nearly doubled after NAFTA took effect, increasing from \$6.4 billion in 1993 to \$12.4 billion in 1996.
  - Imports from Mexico, though increasing, account for a very small percentage of the U.S. market -- less than 3 percent of total U.S. shipments in 1996.
- The NAFTA helped U.S. producers optimize production and manufacturing investment in North America, resulting in a shift of production from the Far East to North America, strengthening the industry's worldwide position.
  - Close to two-thirds of the value of U.S. textile and apparel imports from Mexico in 1996 were comprised of U.S. content, for example, formed and cut fabric.
  - U.S. imports from its NAFTA partners tend to have a much higher U.S. content than imports from outside the region, thus providing increased sales opportunities for U.S. producers. For example, textile and apparel imports from China, Hong Kong, and Taiwan have virtually no U.S. content.
  - The shift in production to North America has helped preserve jobs in the United States by increasing trade in products with high U.S. content. For example, simultaneous with the increase in imports from Mexico from 1993-1996, imports on a quantity basis from China decreased by 22 percent.

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<sup>61</sup> The sectors covered by the term "textiles and apparel" for purposes of this section are textile mill products (SIC 22) and apparel (SIC 23).

## SECTORAL TRADE

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- The U.S. textile and apparel industry invested an average of \$4 billion annually in U.S. production over the past two years. By contrast, U.S. direct investment in place in both Canada and Mexico textile and apparel industries combined was \$371 million in 1995.
- Because NAFTA encourages production sharing in the textile and apparel sector, Mexican plants purchase large quantities of U.S. components, allowing U.S. companies to increase exports, enhance efficiencies, and maintain jobs in the United States.

### Background

The NAFTA has generated increased economic activity and enhanced export prospects for textile and apparel producers in the United States. The market opening and trade liberalizing provisions of NAFTA have begun to shift industry structure and trade patterns. Trade in textiles and apparel among the United States, Canada and Mexico has expanded substantially since the implementation of NAFTA.

The textile and apparel industry produces a wide range of products, including yarn, fabric, apparel, and a variety of home furnishings and industrial products. The combined value of shipments by the U.S. industry increased from \$148 billion in 1993 to approximately \$157.5 billion in 1996. Exports rose by 42 percent over the period, increasing from \$10.1 billion in 1993 to \$14.3 billion in 1996. Total imports increased from \$41.6 billion in 1993 to \$50.2 billion in 1996.<sup>62</sup>

To be internationally competitive in the global marketplace, U.S. producers of textiles and apparel have improved their productivity, concentrated on specialized products, and established a presence in a growing number of foreign markets. The NAFTA has enabled U.S. producers to optimize production and manufacturing investments in North America, resulting in a shift of production from the Far East to North America and strengthening the industry's worldwide position.

U.S. trade with Mexico in textiles and apparel has been dominated for at least the past decade by production-sharing operations, under which component parts are manufactured in the United States and shipped to Mexican maquiladora facilities for assembly and re-export to the United States. In February 1988, the United States established with Mexico a preferential quota program ("special regime") for Mexican-produced textile and apparel products made from U.S. formed and cut fabric. Between 1988 and the initiation of NAFTA negotiations in 1991, this program enabled U.S. and Mexican producers to expand production sharing operations, which resulted in increasing use of U.S. components for Mexican-produced apparel products.

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<sup>62</sup> 1996 shipments are estimated.

## OPERATION AND EFFECT OF THE NAFTA

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### Developments since NAFTA

#### *Highlights of NAFTA Implementation*

##### Tariff Cuts

Prior to NAFTA, Mexico's average tariff on U.S. textile and apparel products was 16 percent, with rates as high as 20 percent on some products. By contrast, the average U.S. tariff on Mexican imports was 9.1 percent -- some 40 percent less than Mexico's average tariff. The NAFTA immediately eliminated tariffs -- ranging from 10 to 20 percent -- on over one fifth, or \$250 million, of U.S. exports to Mexico, providing increased access for U.S. producers. By January 1, 1998, Mexico will have eliminated its duties on 93 percent of U.S. yarn and thread exports, 89 percent of U.S. fabric exports, 60 percent of U.S. exports of made-up textiles, and 97 percent of U.S. apparel exports. Mexico will eliminate its remaining tariffs by January 1, 2003. Under NAFTA, the U.S. will eliminate its tariffs over 5 years on 95 percent of Mexican fabric exports, 83 percent of made-up textiles, and 99 percent of apparel exports. The U.S. will phase out tariffs on more sensitive products over ten years.

While NAFTA guarantees U.S. textile producers preferential access to the Mexico market, it does not prevent Mexico from raising tariffs on products from outside the region. In fact, Mexico responded to the peso devaluation in part by raising duty rates on textiles and other manufactured products from non-NAFTA countries to 35 percent. At the same time, Mexico continued to apply its lower NAFTA rates to U.S. and Canadian imports.

##### Elimination of Non-Tariff Barriers

Under NAFTA, Mexico must gradually increase the amount of maquiladora production that can be sold in the domestic market. Increased sales of textiles and apparel into Mexico's domestic market from the maquiladora operations will prompt greater demand for the American-made textile components from which such products are made.

The United States lifted its import quotas on North American-origin textiles and apparel when NAFTA went into effect. The United States is phasing-out its quotas on imports from most non-NAFTA countries under the Uruguay Round Agreement.

To qualify for special tariff and quota treatment, goods generally must be produced from yarn made in a NAFTA country ("yarn forward"). The NAFTA includes exceptions to this general rule, however, intended to give producers flexibility to import products when needed. One example is a system of "tariff preference levels" established in NAFTA under which yarn, fabric, and apparel that is made in North America but does not meet the yarn forward test may nevertheless be accorded preferential duty treatment up to agreed annual import levels.

## SECTORAL TRADE

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### *Trade Flows*

U.S. exports of textiles and apparel to Mexico increased by 79 percent between 1993 and 1996, increasing from \$1.6 billion to \$2.8 billion, despite Mexico's recession. The U.S. share of Mexico's textile and apparel imports rose from 68 percent in 1993 to 86 percent in 1996. U.S. shipments to Canada during the period rose by 39 percent to \$2.7 billion. Mexico's exports to the United States increased from \$1.4 billion in 1993 to \$4.2 billion in 1996. Canada's exports to the United States rose from \$1.0 billion to \$2.0 billion during the period.

In 1996, U.S. exports to Canada and Mexico accounted for 38 percent of total U.S. exports, up from 34 percent in 1993, reflecting a combined export increase of 57 percent to NAFTA countries during the period. U.S. textile and apparel exports to Canada and Mexico were ten times greater than U.S. exports to China, Taiwan, Hong Kong and Korea combined, and two times as large as exports to Japan and the European Union combined.

The NAFTA has prompted a shift in the growth of textile and apparel trade from the Far East to NAFTA countries. The NAFTA has made Mexico and Canada the top two suppliers of textiles and apparel for the United States, benefitting U.S. producers whose fiber, yarn, and fabric is incorporated in their products. Between 1993 and 1996, total U.S. imports of textile and apparel products from China, Taiwan, Hong Kong and Korea -- the major Far East suppliers -- declined by 13 percent on a quantity basis while imports of textiles and apparel from Canada and Mexico more than doubled. Because NAFTA's strict rules limiting preferential duty and quota treatment to products made in North America -- and given growing regional integration in the sector -- these imports contain increasing amounts of U.S. textile components. This is not the case with imports from Asia, which use very limited quantities of U.S. components.

On a value basis, almost two-thirds of Mexico's textile and apparel exports to the United States are currently manufactured using U.S. component parts. In 1990, 42 percent (\$287.0 million) of total U.S. imports from Mexico were assembled in Mexico from U.S. components. This share grew to 52 percent (\$717.9 million) in 1993 and to 64 percent (\$2.7 billion) in 1996. At the same time, imports from Mexico increased from 2.4 percent of total U.S. textile and apparel imports in 1990 to 9.2 percent in 1996 -- using growing volumes of U.S. components.

In 1993, the top suppliers of textiles and apparel products to the United States were China, Hong Kong, Taiwan and Korea. Together these countries accounted for 39 percent, or \$14.1 billion of the total \$36.1 billion of U.S. imports of textiles and apparel products, while Canada and Mexico accounted for seven percent, or \$2.4 billion in 1993. By 1996, imports from Canada and Mexico increased 160 percent over their 1993 level and accounted for 14 percent -- or \$6.2 billion -- of the \$45.9 billion in total U.S. imports of textiles and apparel products. By contrast, combined imports from China, Hong Kong, Taiwan and Korea in 1996 had fallen \$13.7 billion, or 3 percent below the value of 1993 imports. As a result, their combined share of the U.S. import market in 1996 was 9 percentage points below their 1993 level.

## **OPERATION AND EFFECT OF THE NAFTA**

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### ***Investment***

Since NAFTA went into effect, U.S. investment in the Canadian and Mexican textile and apparel industries has not changed significantly. Many U.S. apparel companies had begun using Mexico as an assembly base prior to the entry into force of NAFTA. The NAFTA's strict "yarn forward" rules of origin for most textiles and apparel mean that only those products that are made of fabric woven in North America from North American yarn qualify for preferential NAFTA tariff and quota treatment. Production sharing under NAFTA has been extremely beneficial to U.S. fiber, yarn, and fabric producers and has encouraged a shift in consumption towards NAFTA-made textiles and apparel with U.S. components -- and away from imported products with little or no U.S.-content.

Approximately 25 percent of the maquiladora plants are textile and apparel operations. Because NAFTA encourages production sharing in the textile and apparel sector, the Mexican plants purchase large quantities of U.S. components, allowing U.S. companies to increase exports and enhance efficiencies, thereby maintaining jobs in the United States.

While firms from other countries have also responded to the expanded market opportunities created by NAFTA, the United States remains overwhelmingly the largest foreign investor in Mexico's textile and apparel industry, accounting for a majority of 1995 foreign investment.

### ***Employment, Earnings, and Productivity***

The number of production jobs in the textile and apparel industries has been on a downward trend for nearly three decades, a development related to the effects of productivity improvements, international competition, and other factors. Between 1973, the peak year for textile and apparel employment, and 1993, the number of production workers in the U.S. textiles and apparel sector declined from 2.4 million to 1.7 million. Between 1993 and 1996, employment declined by 181,000, to 1.5 million workers. At the same time, productivity in the textile and apparel industry rose by 6.7 percent between 1993 and 1995 (the latest year available), and wages for production workers were up 4.1 percent.

Changing technology in the industry has altered employment patterns. The loss of apparel jobs has been primarily among assembly workers, while employment levels for more-skilled, higher-paying jobs -- such as cutting, computer-aided design and manufacturing, marketing and product development -- have remained relatively constant. Moreover, advances in productivity have to some degree allowed U.S. textile and apparel manufacturers to maintain output through automation and technological improvements, while requiring fewer workers. Increased competitiveness resulting

## SECTORAL TRADE

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from technological improvements and production-sharing has enabled the textile and apparel industries to increase their constant dollar value of industry shipments.

## OPERATION AND EFFECT OF THE NAFTA

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### AGRICULTURE

#### Sectoral Findings

- U.S. agricultural exports<sup>63</sup> to Mexico increased from \$3.6 billion in 1993 to \$5.4 billion in 1996.
  - The United States is by far the largest supplier of agricultural goods to Mexico, with a 75 percent share of Mexico's imports.
  - The nearly 15 percent average annual growth rate for U.S. exports to Mexico compared favorably with a 12.4 percent growth rate for overall U.S. agricultural exports.
  - Combined sales to Mexico of twelve key commodities -- corn, soybeans, wheat, field seeds, vegetable oils, cotton, sugar and related products, barley, pulses (bean, peas, lentils), beef and veal, rice, and soybeans -- rose by \$2 billion, up more than 150 percent.
- U.S. imports from Mexico grew from \$2.7 billion in 1993 to \$3.8 billion in 1996, reflecting an 11.6 percent average annual increase, slightly above the growth rate of U.S. agricultural imports from all sources.
- The NAFTA in isolation has had a positive overall effect on U.S. agriculture, reinforcing the trend toward greater integration of the North American agricultural marketplace and a more productive and efficient American agricultural sector.
  - U.S. exports to Mexico as a whole rose modestly as a result of NAFTA although certain commodities -- sorghum, cattle, beef, dairy products, apples, and pears -- benefitted substantially.
  - U.S. imports also rose due to NAFTA, but somewhat less.
  - The NAFTA also had a small, but positive impact on employment and investment in U.S. agriculture and rural areas.

#### Background

The United States is the world's largest and most competitive exporter of agricultural commodities, shipping over \$60 billion dollars in agricultural goods during 1996 to countries around the world.

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<sup>63</sup> This section covers grains, oilseeds and oilseed products, livestock and livestock products, vegetables, citrus, fresh fruit, and other crops (including sweeteners).

## SECTORAL TRADE

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Agricultural exports were at record highs last year, with Canada and Mexico the second and third largest markets for U.S. agricultural goods, accounting for about 10 and 9 percent of U.S. exports, respectively. U.S. agricultural exports to North America have grown rapidly since NAFTA went into effect and, if recent trends continue, could reach \$30 billion per year by 2005 -- up from \$11.6 billion in 1996.

### **Developments since NAFTA**

#### ***Highlights of NAFTA Implementation***

##### Tariff Cuts

Most tariffs and other barriers to agricultural trade between the United States and Mexico were relatively low before NAFTA. The NAFTA will eliminate by 2008 all tariffs, quotas and licenses that restrict agricultural trade between the United States and Mexico. Prior to NAFTA, some U.S. exports did face high tariffs in Mexico. For example, vegetable oils, processed meats, and tree nuts were subject to tariffs ranging from 15 to 20 percent. Mexican tariffs on animal and vegetable oils and on farm animals and meat products were 12.0 and 6.5 percent, respectively, in comparison to U.S. tariffs of only 2.5 and 0.7 percent, respectively. (In one category, vegetable products, Mexico's average tariff was slightly lower than that of the United States -- 4.1 versus 5.6 percent.)

As a result of NAFTA, the United States and Mexico will eliminate all tariffs in their bilateral agricultural trade by 2004, except for those on a few products which will be phased out by 2008. The United States scheduled 15-year phase-outs of its tariffs on vegetables and melons. Products such as these are also protected against import surges by a special NAFTA agricultural safeguard provision.

##### Non-Tariff Barriers

As required by NAFTA, the United States and Mexico eliminated all non-tariff barriers to bilateral agricultural trade when NAFTA went into effect. Prior to NAFTA, about 25 percent of U.S. agricultural exports to Mexico, by value, were subject to restrictive import licensing requirements. When NAFTA entered into force, Mexico immediately converted its import licensing regime for certain U.S. products -- such as wheat, grapes shipped during certain periods, tobacco, cheese, and evaporated milk -- into tariffs that Mexico must phase out by 2004. Mexico converted its licensing requirements for other products -- including corn, dry beans, poultry, barley and malting barley, animal fats, potatoes, and eggs -- to tariff-rate quotas (two-tiered tariffs, TRQs). The United States agreed to convert its import quotas for Mexican dairy products, cotton, sugar containing products, and peanuts to TRQs.

The NAFTA requires that imports of products subject to TRQs be duty free up to a certain import volume, but permits the imposition of high tariffs on quantities in excess of that volume. The

## OPERATION AND EFFECT OF THE NAFTA

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Agreement requires both countries gradually to expand the “in quota” (*i.e.*, duty free) quantity of each such product and to eliminate tariffs on the “over quota” quantity by 2004 or 2008, depending on the product.

The NAFTA also sets rules regarding the application of laws and regulations for the protection of food safety and plant and animal health (sanitary and phytosanitary measures, or SPS), requiring them to be based on scientific principles, risk assessments, and relevant international standards. However, NAFTA explicitly permits each government to set the degree of risk that it will tolerate, including by setting protection levels higher than those established under international standards. The NAFTA also requires the three parties to credit SPS measures applied by other governments when they are equivalent to their own.

### *Trade Flows*

The NAFTA has had an overall positive effect on U.S. commodity markets, reinforcing the trend toward greater integration of the North American agricultural marketplace. U.S. agricultural exports to Canada and Mexico increased from \$8.9 billion in 1993 to \$11.6 billion in 1996, while U.S. agricultural imports from those countries grew from \$7.3 billion to \$10.5 billion. The NAFTA also has enhanced the competitiveness of U.S. agriculture by reducing border protection, and benefitted American consumers by affording them more open access to wider sources of supply. More open trade within North America has mitigated local production shortfalls caused by adverse weather, securing more stable supplies and reducing price volatility.

The relatively small tariff and non-tariff policy changes attributable to NAFTA to date are unlikely to have generated the magnitude of trade flows that occurred in some commodities. The Mexican peso crisis was the primary cause of the year-to-year variability in U.S.-Mexico agricultural trade since NAFTA went into effect, but weather-related production shortfalls, domestic agricultural policy changes, U.S. income growth, and changing technology all contributed to the growth in trade.

### U.S. Exports to Mexico

From 1993 to 1996, U.S. agricultural exports to Mexico rose from \$3.6 to \$5.4 billion. This increase reflected an average annual growth rate of nearly 15 percent, compared with a 12.4 percent growth rate for U.S. agricultural exports to the world as a whole. According to Mexican Government statistics, the U.S. share of Mexico’s agricultural imports increased from 69 percent in 1993 to 74.9 percent in 1996.

A broad range of U.S. agricultural commodities benefitted from this export growth. Combined sales to Mexico of twelve commodities -- corn, soybeans, wheat, field seeds, vegetable oils, cotton, sugar and related products, barley, pulses (bean, peas, lentils), beef and veal, rice, and soybeans -- rose by \$2 billion, up more than 150 percent. The NAFTA boosted U.S. exports to Mexico for a number of products, particularly those facing the highest pre-NAFTA trade barriers and experiencing the

## SECTORAL TRADE

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sharpest reduction in those barriers since 1993. Some of the biggest gains in U.S. exports to Mexico due to NAFTA were for sorghum, cattle, beef, dairy products, apples, and pears.<sup>64</sup> In addition, U.S. exports of grains and feeds increased by 33 percent from 1993-1996. Exports of corn grew by 1,267 percent from \$75 million to \$1 billion. Exports of soybeans increased 104 percent, to \$88 million in 1996. And, U.S. exports of oilseeds grew by 13 percent over the same period.

While Mexico maintains prohibitively high over-quota tariffs to imports of U.S. corn, dry beans, and poultry, the Mexican Government elected not to apply those tariffs during the period. This policy resulted in substantial export increases for these U.S. products, which account for about 25 percent of all U.S. agricultural exports to Mexico.

The robust performance of U.S. agricultural exports to Mexico for the period overall masks the decline in exports during 1995 in the wake of the peso crisis. The collapse of the Mexican peso in December 1994 and the subsequent recession reduced Mexican consumers' purchasing power and increased the short-term price competitiveness of Mexican exports. U.S. agricultural exports to Mexico fell by 22 percent in 1995, largely offsetting gains from 1994. The Mexican economy began a strong recovery in 1996, and U.S. agricultural exports to Mexico rebounded, increasing almost 55 percent.

Overall U.S. exports to Mexico rose modestly as a result of NAFTA alone.<sup>65</sup> The direct effect was small because trade barriers were relatively low before the Agreement began, NAFTA has completed only the third year of a fifteen year liberalization schedule, and trade barriers are only one of many factors that influence agricultural trade.

### U.S. Imports from Mexico

U.S. imports from Mexico grew from \$2.7 billion in 1993 to \$3.8 billion in 1996. U.S. imports from all sources rose during the same period from \$25 billion to \$33.6 billion. The largest export gains for

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<sup>64</sup> USDA estimate. The ITC study examined seven agricultural groups and found that NAFTA had significant effects on two of these sectors - grains and oilseeds (wheat, corn soybeans, and other cash grains) and raw cotton. For both sectors, the ITC found that NAFTA in isolation increased U.S. exports to Mexico. The impact on investment, employment and other trade flows for these products and the other agricultural goods examined by the ITC was found to be negligible.

<sup>65</sup> USDA estimate.

## OPERATION AND EFFECT OF THE NAFTA

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Mexico over the period were in fresh and processed tomatoes,<sup>66</sup> other vegetables, and peanuts. Much like U.S. exports to Mexico, U.S. imports rose modestly as a result of NAFTA.<sup>67</sup>

### *Investment and Employment*

The NAFTA in isolation has had a small, but positive impact on employment in the United States since its entry into force.<sup>68</sup> Moreover, three years into NAFTA, investment in U.S. agriculture and rural areas has increased slightly due to NAFTA.<sup>69</sup> As Mexico continues to open its agriculture market to U.S. products over the next eleven years as required by NAFTA, U.S. exports, employment, and investment in the agricultural sector will continue to grow.

In addition, as NAFTA increases North American integration in the agricultural sector, labor and capital will move from less productive to more efficient farms, firms, and industries. This dynamic process of market adjustment will continue throughout implementation of the Agreement. The strong export performance of U.S. agriculture thus far suggests that NAFTA is creating incentives for U.S. labor and capital to increase, and prosper, in the agricultural sector.

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<sup>66</sup> Tomato trade was not significantly affected by NAFTA. Tariff reductions on U.S. imports of winter tomatoes from Mexico have been very small to date, less than 1.5 percent on an *ad valorem* basis. The peso crisis, technological shifts in tomato production, and unusual weather in Florida were the major factors affecting U.S. tomato imports.

<sup>67</sup> USDA estimate.

<sup>68</sup> USDA estimate.

<sup>69</sup> USDA estimate.